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Mar, 2021

Current Affairs

"A MONTHLY MAGAZINE FOR **UPSC CIVIL SERVICES EXAMINATION**"

India can become the Pharmacy of the World

Learnings from COVID-19

Oil Spills: Environmental Impact and Mitigation Strategies

Freedom of Speech and Expression: Rights and Responsibilities

Understanding the State of Mental Health In India

VISIT…

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March, 2021

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MESSAGE TO THE READERS

The March 2021 Issue of the Next IAS Current Affairs Magazine (hereafter called 'The Magazine'), covers news events from 1st Febuary 2021 to 28th Febuary 2021 (hereafter called 'Coverage Period'). The Magazine has comprehensive coverage of all the topics from current affairs neatly categorized into major sections like Economy, International Issues, Polity & Governance, and so on.

This issue of the magazine has an in-depth analysis of issues such as **'India can become the Pharmacy of the World: Learnings from COVID-19, 'Oil Spills: Environmental Impact and Mitigation Strategies', 'Freedom of Speech and Expression: Rights and Responsibilities'** and **'Understanding the State of Mental Health in India.** The Magazine also covers the issues of **'Common Admission Test for Central Universities' 'India's National Hydrogen Mission' and 'Digital Literacy in India'** and many other issues which have become relevant in the coverage period.

The Magazine is designed for the needs of the students who are preparing for UPSC Civil Services Examinations. However, it is also helpful for Engineering Services Examinations, Banking Examinations and other government or Public Sector Enterprises examinations

Any suggestion for further improvement of the Magazine is welcome and may be e-mailed to currentaffairs@nextias.com

Team NEXTIAS

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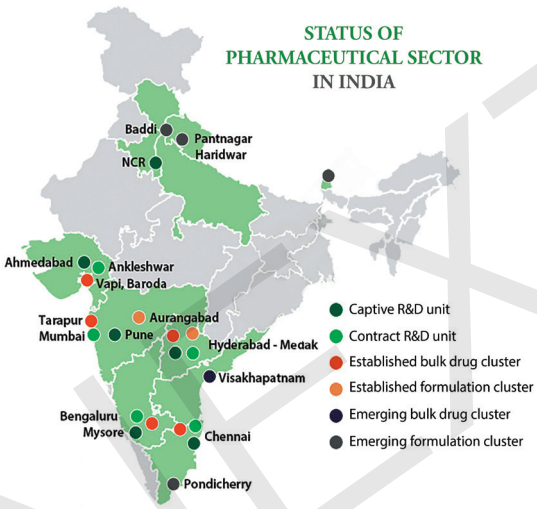
In-Depth
Article

INDIA CAN BECOME THE PHARMACY OF THE WORLD: LEARNINGS FROM COVID-19

The Ministry of Chemicals & Fertilizers (MoC&F) organised an international Conference on Pharmaceutical & Medical Device sector

About:

- Covid-19 has presented both an opportunity and a challenge for India to emerge as the 'pharmacy of the world'.
- According to the **Economic Survey 2020-21**, a significant raw material base and availability of a skilled workforce have enabled India to emerge as an international manufacturing hub for generic medicines.
- However, Covid-19 has also exposed the **excessive dependence** of Indian pharmaceutical industry on China for sourcing Active Pharmaceutical Ingredients **(APIs)** and Key Starting Materials **(KSMs)**.



Potential of Pharmaceutical sector:

Indian pharmaceutical sector is expected to grow to US$ 100 billion, while medical device market is expected to grow US$ 25 billion by 2025.

- **Pharmacuetical Market of India:** It is export-oriented and extremely profitable.
  - **Export** includes bulk drugs, intermediates, drug formulations, biologicals, Ayush and herbal products and surgical.
  - India exported pharmaceuticals worth nearly US$ 15.86 billion in FY21.
  - The sector is expected to grow at a CAGR of ~22% to reach USD 55 billion by 2020 (from 2015).
- **Biotechnology Industry:** It comprises of biopharmaceuticals, bio-services, bio-agriculture, bio-industry, and bioinformatics.
  - India contributes the second largest share of pharmaceutical and biotech workforce in the world
  - It is expected to reach US$ 150 billion by 2025.
- **Medical devices industry in India:** It has been growing 15.2% annually and is expected to reach US$ 8.16 billion by 2020 and US$ 25 billion by 2025.
- **Other factors** contributing to the growth of pharmaceutical sector in India
  - An increase in disposable income and hence on healthcare expenditure (Indians spend 1% of their income on pharmaceuticals);

Status of Pharmaceutical Sector in India

- India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers with a potential to steer the industry ahead to greater heights.
- India's pharmaceutical industry, which is currently valued at $41 billion, is expected to grow to $65 billion by 2024 and $120-130 billion by 2030.
- The Pharmaceutical industry in India is the 3rd largest in the world in terms of volume and 14th largest in terms of value.
- India contributes 3.5% of the total drugs and medicines exported globally.
- The sector increased at a CAGR of ~13% over 10 year period.
- By 2020, India is expected to be 6th largest market globally.
- India accounts for 20% of global exports in generics, largest provider of generic medicines globally.
- Attracted FDI worth USD 16.86 billion in last 20 years.
- Pharmaceutical is one of the top ten attractive sectors for foreign investment in India.
- The pharmaceutical exports from India reach more than 200 nations around the world, including highly regulated markets of the USA, West Europe, Japan, and Australia.
- India supplied around 45 tons and 400 million tablets of hydroxychloroquine to around 114 countries globally.
- Presently, over 80% of the antiretroviral drugs used globally to combat AIDS (Acquired Immune Deficiency Syndrome) are supplied by Indian pharmaceutical firms.

- Growing capabilities in contract manufacturing, R&D, and clinical trials;
- Opportunities arising out of national healthcare schemes;
- A growing population and demand, especially internationally – as pharma exports have amounted to nearly the same as the domestic pharma turnover.

Opportunities for pharmaceutical industry in India:

- **R&D Infrastructure:** An Indian pharmaceutical company spends anywhere between 2-10% of its revenue on R&D.
  - India's R&D infrastructure is lauded by many because of the cost-effectiveness, upcoming biotech industry, government initiatives, upcoming biotech industry and more.
- **U.S. FDA Compliance:** A prominent growth driver is that we have one of the highest number of FDA compliant plants outside of the U.S. This speaks volumes about our medical infrastructure.
- **Low-Cost Production:** Labour and production are way cheaper in India than many other countries. Hence, we are able to produce drugs and vaccines at a much lower cost.
  - A FICCI report states that the cost of manufacturing formulations in India is at least 30 to 40% lower than most other foreign destinations.
- **Huge Workforce:** The supply of local medical talent into the industry is larger than most other countries.
  - With one of the youngest populations in the world and many of the youngsters picking up the medical profession, the country sees a huge influx of aspiring medical students joining the industry.
  - This is an essential growth opportunity If the government can tap onto this resource with strong academic infrastructure.
  - If medical education can be regulated better, with more professors and increased medical seats, this huge workforce can be tapped.
- **Health Insurance:** Most of the medical expenses in India are largely funded out of the pocket. This means that most of it is paid by the citizens and very less is covered by health insurance.
  - **Health insurance is critical to the growth** of this industry and thus is a budding opportunity for the industry.
- **Medical Technology:** Upscaling medical technology also provides us with a growth opportunity. Government research conducted three years ago valued the medical devices industry $5.2 billion in 2017.
  - Robust medical technology is one of the main pillars as it plays an important role in the delivery of healthcare services.
- **Self-reliance:** India still depends a lot on foreign countries for the import of key raw materials in APIs and intermediates.
  - With the current situation at hand, the industry has a great opportunity at hand to reduce its reliance on imports and explore domestic sourcing locations.

VACCINE DIPLOMACY

India has been using vaccines to increase the country's diplomatic relationship and influence on other countries.

- With India supplying essential drugs like hydroxychloroquine and generic drugs to world, it meets 62 percent of the global demand for vaccines.
- India has spent nearly $16 million on pharmaceuticals, test kits, and other medical equipment for about 90 countries.
- Companies such as Zydus, Bharat Biotech, and Gennova are developing indigenous vaccines which has helped in boosting make in India.
- The most promising two COVID-19 vaccines are the made-in-India Covaxin by Bharat Biotech and Covishield, by Serum Institute.

With Vaccines being the single most powerful health interventions developed by modern medicine, India can utilise vaccine diplomacy to counter China and play a crucial role in health and safety in an increasingly interdependent world.

- **Digital and technology:** Usage of new digital technologies and advanced analytics can upscale the industry's growth.
  - Manufacturing, R&D, quality, sales, supply chain, pharmacy and many other sectors where usage of technology can be a significant growth driver.

ADVANTAGES FOR INDIA

Cost Efficiency	Economic Drivers	Policy Support	Increasing Investments
▶ Low cost of production and R&D boosts efficiency of Indian pharma companies, leading to competitive exports. ▶ Indian pharma export reached US $16.28 billion in FY20.	▶ High economic growth along with increasing penetration of health insurance to push expenditure on healthcare and medicine in India.	▶ Pharma Vision 2020 is aimed at making India a global leader in end-to-end drug manufacturing. ▶ 100% FDI is allowed under automatic route for greenfield pharma. 100% FDI is allowed for brownfield pharma, wherein, 74% is allowed under the automatic route and thereafter through government approval route.	▶ Increasing private sector investment in R&D and acquisitions are driving growth. ▶ Indian drugs and pharmaceuticals sector received a cumulative FDI inflow worth US $16.86 billion between April 2000 and September 2020.

- **Advantage vaccine:** A couple of companies have the WHO approval to manufacture the covid vaccine.
  - Tie-up between the University of Oxford and Serum Institute of India (SII) to mass-produce the AstraZeneca vaccine.
  - The commitment of provision of Covid-19 vaccine to other countries has made India the epicentre for its manufacturing.

Major achievements of Pharmaceutical Industry in India:

- Indian pharma market has touched a new high at over USD 38 billion a year. It has given employment to 2.7 million people, directly and indirectly.
- Affordable medicines under Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) has achieved record monthly sales turnover of $ 7.38 million).
- Under the 'Janaushadhi Suvidha', over 3.43 cr sanitary napkins have been sold at INR 1 per sanitary napkin since August 2019.
- About 11600 educated unemployed youth of the country have got direct sustainable employment under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP).
- The total size of the drugs & medical device industry is around US$43 billion.
- The total export of drugs and medical devices is US$20 billion of which drugs form around 90% of the total exports.
- However, the Covid-19 pandemic has brought to light its dependence on imports from China of active pharmaceutical ingredients and chemical intermediates.

What are the major Challenges?

Economic Survey highlights that there is a disproportionate dependence of Indian pharma exports on the USA and generics.

- **Newer diseases:** The year 2020 has placed enough evidence on the table in this regard. The novel coronavirus has shaken the entire globe by its roots. Lack of a definitive cure is one of the challenges this industry faces.
- **Curbing Costs:** Everything gets expensive with the time. Rising costs and inflation also leads to rising medical costs. Making health accessible and affordable for all is a great task.
  - The government has already initiated efforts in that direction with the Ayushmann Bharat initiative.
  - However, considering that inflation is a dynamic metric, curbing medical costs will remain an ongoing challenge.
- **Medical infrastructure:** This includes hospitals, medical colleges and education, medicines, pharmacies, small medical centres, labs, vaccines, machines that are used in procedures, the manufacturing infrastructure for medicines and everything that keeps the industry in place.
  - Maintaining the quality of infrastructure and expanding it to all urban and rural areas is also a challenge to the company.
- **Foreign regulations:** Many companies receive a lot of their revenues from medical exports. The regulations and compliance norms of foreign countries is a challenge that Indian pharma companies have to face.
  - Trade restrictions, exports and import regulations, customs and taxes and many other caveats that come when international trade comes into the picture.

Major initiatives taken by the government:

- India enjoys an important position in the global pharmaceuticals sector.
  - With India being the 3 largest globally by volume, the Government of India has to take steps ensuring the delivery of affordable healthcare in the country as well as ensuring that there is a steady supply of critical drugs.

Important Initiatives:

- **Pradhan Mantri Bhartiya Janaushadhi Kendra's (PMBJKs)** to promote affordable medicines.
- **Pharma Vision 2020:** It aims to make India a major hub for end-to-end drug discovery. The sector received cumulative Foreign Direct Investment (FDI) worth US$ 16.54 billion in last 20 years.
- **Budgetary support:** Government expenditure on healthcare has been increased to Rs. 3.24 lakh crore (US$ 45.96 billion) in FY20, growing at a CAGR of 18% from FY16.
  - As per Economic Survey 2019-20, Government expenditure (as a percentage of GDP) increased to 1.6% in FY20 from 1.2% in FY15 for health.
  - FDI increased to 74% in existing pharmaceutical companies and 100% in new projects.
  - Proposal of set up a nearly Rs. 1 lakh crore (US$ 1.3 billion) fund to provide boost to companies to manufacture pharmaceutical ingredients domestically by 2023.
  - Promoting medicine spending in India to growth rate of 9-12% over the next five years.
  - Setting up of Ayurveda institutions and Global Centre of Traditional Medicine in India.
  - Grant of Rs. 6,400 crores (US$ 915.72 million) to health insurance scheme Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).
- **National Health Protection Scheme:** It is the largest Government funded healthcare programme in the world, which is expected to benefit 100 million poor families in the country.
  - It provides a cover of up to Rs. 5 lakh (US$ 7,723.2) per family per year for secondary and tertiary care hospitalization.

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- **Umbrella Scheme for Development of Pharma industry.**
  - Assistance to Bulk Drug Industry for Common Facilitation Centres
  - Assistance to Medical Device Industry for Common Facilitation Centres.
  - Assistance to Pharmaceutical Industry (CDP-PS).
  - Pharmaceutical Promotion and Development Scheme (PPDS).
  - Pharmaceutical Technology Upgradation Assistance Scheme (PTUAS).
- **Pharmaceuticals Promotion Development Scheme (PPDS):** Under the PPDS, the Department of Pharmaceuticals aims to:
  - Conduct Training/knowledge improvement programs/ activities on issues/subjects relevant to the growth of the pharmaceutical industry.
  - Organize Summits, Convention, Exhibitions, Pharmacy week, meetings etc. in India and abroad and produce promotional materials like films, displays etc.
  - Conduct research studies, sector reports etc.
  - Purchase books, quality standards, pharmacopoeias, magazines, directories, software for developing information data banks, developing e-learning modules etc.
  - Give awards to achievers in pharmaceutical industry.
- **National Telemedicine Service:** The National Telemedicine Service "eSanjeevani" is a digital health initiative of the Ministry to implement teleconsultation in all the 1.5 lakh Health and Wellness Centres in a 'Hub and Spoke' model, by December 2022.
- **eSanjeevani** has completed 8 lakh consultations on 20 November 2020. Over 11,000 patients are seeking health services on a daily basis in 27 States/UTs.
- **Scheme for Promotion of Bulk Drug Parks:** Under the scheme, the Government of India has approved a sum of INR 3,000 cr for setting up 3 mega Bulk Drug Parks in the country.
  - Grants-in-Aid will be provided to States with a maximum limit of INR 1000 cr per Bulk Drug Park.
- **Production Linked Incentive (PLI) Scheme:** Under the scheme, the Government of India will provide up to 20% incentives on incremental sales of 41 products stipulated in the scheme guidelines.
  - The total financial support approved by the government under this scheme is INR 6,940 cr.
- **Promoting Foreign Direct Investment (FDI):** FDI in the industry is permitted **100% in greenfield pharma** under automatic route.
  - Up to **74%** is allowed in **brownfield pharma** under automatic route, thereafter government route.
  - India has received FDI worth almost $16.2 billion in the industry in last 20 years.

REGULATION FOR PHARMACEUTICAL SECTOR

Drugs and Cosmetics Act 1940:

- Seizure of sub-standard drugs stocks.
- Regulation of Sale and distribution of drugs by states' health departments.

Central Drugs Standard Control Organisation (CDSCO)

- Licensing, approval, regulation of clinical trials and the quality assurance by the Drugs Controller General of India at the central level.

Medical Devices (Amendment) Rules, 2020

- Notification of medical devices as 'drugs.

National Pharmaceutical Pricing Policy, 2012

Under it, National List of Essential Medicines (NLEM) – is released for the regulation of prices of drugs on the basis of the essentiality of the specified drugs. It oversees the:

- The regulation of prices of drugs on the basis of regulating the prices of formulations only.
- The regulation of prices of drugs on the basis of fixing the ceiling price of formulations through Market-Based Pricing.
- The provision of exemptions to drugs manufactured through indigenous R&D from price control for five years.
- A Drug Price Control Order 2013 has been notified in May 2013 to implement the provisions of NPPP-2012.

Way Ahead:

- Medicine spending in India is projected to grow 9 12% over the next five years, leading India to become one of the top 10 countries in terms of medicine spending.
- For a sustainable market and a robust growth rate, there is need for developing innovative business models d for an equilibrium in drug price controlling and local manufacturing costs.
- Though the government has eased its protectionist policies, timely and effective implementation is crucial to address the challenges of the pharma sector.
- As countries are willing to invest in the Indian market for the supply of COVID-19 vaccine and medical equipment, this is the chance for India to not only become truly atmanirbhar in the pharmaceutical segment but also a soft power giant by harnessing its vaccine diplomacy wisely.

■■■■

In-Depth
Article

OIL SPILLS: ENVIRONMENTAL IMPACT AND MITIGATION STRATEGIES

Furnace oil from the state-run Travancore Titanium Products Limited (TTPL) in Thiruvananthapuram has leaked into the adjoining Arabian Sea

About:

- Fishermen and local people alleged that the oil leak would have a prolonged impact on marine resources, and consequently, their livelihood.
- The government has thus ordered a probe and launched an emergency cleaning operation.
- District authorities have planned to shift people living near the factory after a nauseating smell filled the air.

Where Titanium reserves are found in India?

- India is only a handful of countries around the world that boasts of titanium deposits. It has 21 per cent of the global deposits along its 7,000-km coastline.
- It has rich reserves of titanium ore in the beach sands along the coasts of Kerala, Tamil Nadu, Andhra Pradesh and Odisha.

Application of Titanium:

- It's as strong as steel, more durable than aluminium and has a higher fashion quotient than platinum when it comes to avant garde jewellery.
- It's nicknamed the "space-age metal" for its widespread use in airlines and defence because of its lightweight and durable nature.
  - Properties like high strength to weight ratio and excellent corrosion resistance make Titanium alloys useful for liquid propellant tanks for launch vehicles and satellites, gas bottle/liners, inter tank structures and interface rings for satellites.
- In India, most of the titanium processing is in manufacturing pigment-grade titanium dioxide.

MINERAL-RICH REGION AND DEMAND IN THE COUNTRY

MINERAL-RICH REGION

1. Ilmenite found on Kerala coast contains 60 per cent titanium dioxide.
2. Chavara deposit has 127 million tonnes of heavy minerals, of which ilmenite accounts for 79.45 million tonnes.
3. Key amkulam bar-Thottappally sector has an estimated mineral deposit or 17 million tonnes.

DEMAND IN THE COUNTRY

1. Titanium pigment demand in India: 8 lakh tonnes per annum.
2. 7.6 lakh tonne titanium imported from China
3. Demand for titanium mill products to reach 3700 tonnes by 2027

NATURE OF TITANIUM

1. It stands equal to steels in strength, but weighs only 45 per cent of it.
2. Used for aircraft-making due to low weight and ability to withstand high temperature.
3. Corrosion resistant.

Melting point: 1,668 degree Celsius

- Major players in the titanium metal industry are Russia, China, USA, Ukraine, Australia and Japan.
- In the next 20 years, 43,000 new aircraft valued at 6.3 trillion US dollars will be added to the existing fleet, hiking demand for titanium.

Titanium Toxicity:

- Titanium is not considered a toxic metal but it is a heavy metal and it does have serious negative health effects.
- Titanium has the ability to affect lung function causing lung diseases such as pleural disease, it can cause chest pain with tightness, breathing difficulties, coughing, irritation of the skin or eyes.
- It is carcinogenic and may also cause cancer.
- Scientists have found that sunscreen from bathers releases significant quantities of polluting TiO2 (titanium dioxide) into the sea.

USES OF TITANIUM

Boeing 737 Dreamliner is made of 15 percent titanium

Used for 3D printing, manufacturing paint, medicine, cosmetics and toothpaste

Titanium dioxide used in solar cell applications

Titanium implants used to stabilise broken bone

Defence sector titanium is the metal of choice for armour.

Rare earth minerals found on Kerala Coast

- Ilmenite
- Rutile
- Zircon
- Monazite
- Leucoxene (brown Ilmenite)
- Sillimanite
- Garnet

Top-notch

A detailed survey by Atomic Minerals Directorate had found the mineral sand deposit between Neendakara and Kayamkulam Bar over a length of 22 km with a width of 225 m was one of the best in the world because of high titanium dioxide content in the mineral ilmenite.

- The concentrated TiO2 or long-term exposure could be toxic to a variety of fish and other aquatic organisms.

- Thus, the titanium extraction plants face several oppositions by the locals as companies do not setup an effective effluent treatment plant for waste management and dump poisonous effluents into the sea. Also, accidents like furnace oil leakage also adds to oil pollution.

Oil pollution in water:

- Oceans are polluted by oil on a daily basis from oil spills, routine shipping, run-offs and dumping.
- Oil spills make up about 12% of the oil that enters the ocean. The rest come from shipping travel, drains and dumping.
- An oil spill from a tanker is a severe problem because there is such a huge quantity of oil being spilt into one place.

Damages to environment by oil pollution:

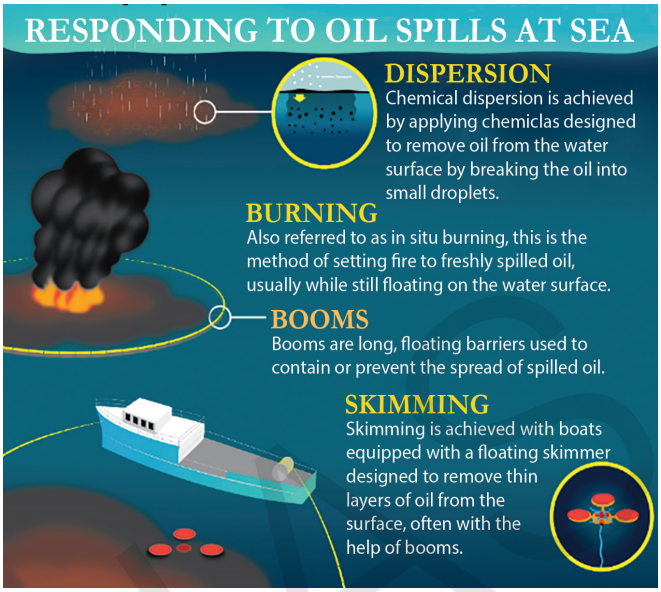
- Oil pollution can damage ecosystems, including plants and animals, and contaminate water for drinking and other purposes.
- Plants that grow in or near the water can be harmed by oil pollution.
  - An oil spill can block the sunlight that plants need for photosynthesis, which kills plants growing in the water.
- The feathers and fur of birds and marine animals can become coated in oil
  - Animals then can no longer insulate themselves against the cold water
  - Birds then have difficulty in flying
- When the animals clean themselves, they also ingest some of the oil which is again harmful.
- Fish can be suffocated by the thick sludge of oil on the water surface, and bottom-dwelling fish can develop liver disease, as well as reproductive and growth problems.
- Oil pollution thus affects fishing and hunting, which is especially detrimental for people who rely on hunting and fishing, such as many rural communities.

Challenges in handling oil spills:

- **Spreads very quickly -** Most oil is less dense than water, so when oil spills, it spreads quickly across the water surface.
- **Travels greater distance from origin** – Currents, tides and winds can move the oil and carry it to a greater distance.
- **Changing characteristics -** Natural physical, chemical and biological processes can cause the oil to weather, changing the characteristics of the oil.

How is oil pollution cleaned up?

There are several clean-up methods that can be used, depending on the type and amount of spilled oil, the water location and local weather conditions.


RESPONDING TO OIL SPILLS AT SEA
DISPERSION
Chemical dispersion is achieved by applying chemiclas designed to remove oil from the water surface by breaking the oil into small droplets.
BURNING
Also referred to as in situ burning, this is the method of setting fire to freshly spilled oil, usually while still floating on the water surface.
BOOMS
Booms are long, floating barriers used to contain or prevent the spread of spilled oil.
SKIMMING
Skimming is achieved with boats equipped with a floating skimmer designed to remove thin layers of oil from the surface, often with the help of booms.

- **Natural methods: bioremediation**
  - There are already microorganisms present in the environment that can break down many harmful chemicals, including gasoline and oil.
  - To increase the rate at which the microorganisms work, nutrients, such as nitrogen or phosphorus, are often added.
- **Booms**
  - Because oil spreads very quickly, the most important primary step is to contain the spill to as small of an area as possible.
  - Booms are one of the most commonly used tools, because they can contain the oil to keep it from spreading.
- **Chemical dispersants**
  - Oil can eventually break down naturally, and chemical dispersants act to speed up the natural process.
  - The oil binds to the dispersant, and is able to move further down the water column, meaning that the oil disperses into the water.
  - The water dilutes the oil to a concentration that is less harmful to aquatic life in the region.
- **Skimmers**
  - These are boats that can skim oil from the water surface.
  - Skimmer doesn't change the physical or chemical properties of the oil, as methods such as using chemical dispersants do.
- **Burning**
  - It can remove the oil from the water surface quickly and efficiently.
  - However, the burning of oil releases nitrogen and sulphur, which in turn causes acid rain causing additional pollution.

Oil spill response measures in India:

- **The Indian Coast Guard**, part of the Ministry of Defence, is the designated national authority for oil spill response in Indian waters under the National Oil Spill-Disaster Contingency Plan (NOS-DCP).
- In 2015, India ratified the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunker Convention) which ensures adequate, prompt, and effective compensation for damage caused by oil spills.
- **The Merchant Shipping Act, 1958**, and **The Merchant Shipping (Prevention of Pollution of the Sea by Oil) Rules, 1974**, deal with spills, leakages and discharge from vessels in the sea.
- NOS-DCP was also updated in 2015 and to setup an Online Oil Spill Advisory (OOSA) system to help agencies involved in oil spill cleanup and control measures in the event of oil spill.
- The OOSA system provides India with indigenously developed capabilities for
  - prediction of trajectory of oil spills,
  - mapping of environmental sensitivities in coastal zones,
  - deployment of aerial dispersant spray system and facilitating the regional oil spill contingency plans
- Since 2011, in collaboration with the government, Oil Spill India (OSI) has been showcasing the best practices, technologies and experiences on oil spill management.
  - OSI is an international forum on oil spill prevention, preparedness, response and restoration systems.
- NDMA has also prepared guideline to ensure Auto alarm system and Leak detection System to check any leakage/ spillage during transport of oil.

Issues in tackling oil spill in India:

- Recurring oil spill disasters in India have been failed to be quickly contained.
- Removal of the coastal sludge has been many a times depended in large part on short-term tactical measures and volunteers wielding buckets.
- India still faces lack of specialized equipment and shortage of trained personnel to be deployed during such times requiring immediate response.
- **Faulty aptitude –**
  - It has also been observed that port officials have insufficiently invested in the contingency planning process.
  - No action is taken against oil companies which flout regulations mandated by NOSDCP to check oil spill.
  - They are even known to avoid attending NOSDCP review meetings aimed at revising and updating specific procedures. This hampers the crucial information being passed on to Coast Guards during disaster.
- The port officials thus many a times have to depend entirely on the Coast Guards (CG) for the containment and clean-up operation.

Way Forward:

- **Greater accountability** - After an accident at sea, the official inquiry usually holds central agencies responsible for the failure to contain an oil leakage.
  - However, bodies that provide information on the course of an oil spill, such as the Indian National Center for Ocean Information Services and port officials must also be held accountable.
- **Contingency Plans** need to be tested, validated and continually updated.
- Timely Response and Trained manpower are the key to success.
- Oil spill response equipment should be commensurate to anticipated risk.
- Promotion of mutual aid/pooling of resources among oil handling agencies.
- Creation of a National Level think tank of experts and stake holders for oil spill on relevant issues.

National Oil Spill-Disaster Contingency Plan

- NOS-DCP was promulgated in 1996 and last updated in 2015. It comes under the Ministry of Home Affairs.
- The Indian Coast Guard is responsible for maintaining and implementing the NOS-DCP
  - It acts as the Central Coordinating Agency for combating oil pollution in various maritime zones, except in the waters of ports and within 500m of offshore platforms, refineries and associated facilities.
- The Director General Coast Guard (DGCG) is the Central Coordinating Authority (CCA) and direct the various aspects of pollution response operations assisted by the Seaboard Commander and various regional and district commanders.
- The plan brings together the combined resources of Government of India, State Governments and Shipping, Ports and Oil Industries.
- It promotes development of Regional and Local Contingency Plans in the five Coast Guard Regions, various ports, oil companies and coastal states.
- The plan demand agencies to maintain:
  - An Oil Spill Contingency Plan
  - Oil Spill Response Equipment
  - Trained Manpower

In-Depth
Article

FREEDOM OF SPEECH AND EXPRESSION

RIGHTS AND RESPONSIBILITIES

After Republic Day violence during protests against agricultural, the government charged several journalists under sedition to deter critical reporting and thereby freedom of speech.

About:

In light of the continuing faceoffs between protestors and administration, it becomes pertinent to understand the tenuous relationship between Right to Freedom of Speech and Expression and Reasonable Restrictions.

Freedom of Speech In India:

- Right to Freedom of Speech is one of the most fundamental freedoms enshrined in the Indian Constitution.
- **Article 19(1)** (a) of the Constitution of India states that all citizens shall have the right to freedom of speech and expressions
- The philosophy behind this Article lies in the Preamble of the Constitution, where a solemn resolve is made to secure to all its citizen, liberty of thought and expression.
- It thus grants Indian citizens the right to communicate their thoughts and views without apprehension, by means of words either written or spoken, pictures or some other visual or communicable representation such as gestures or signs.
- However, it is not an absolute right and the State can enforce reasonable restrictions under Article 19(2) of the Constitution.
- These reasonable restrictions are based on various provisions like defamation, contempt of court, security of state, sedition, public order etc.

Rising Instances of Curbs on Freedom of Speech in India:

Use of Sedition Law

- **Section 124A of the Indian Penal Code (IPC)** defines sedition as any attempt to bring hatred, contempt or disaffection towards government.
  - Several sedition cases have also been registered in the near past during the ongoing farmer's agitation, after the Hathras gangrape, amid protests against the Citizenship Amendment Act in 2019 and after the Pulwama terror attack.
- **According to NCRB data**, there has been steep rise in sedition cases from 47 in 2014 to 70 in 2018.
- **Poor Conviction Rate:** However, the conviction rate has been extremely poor and since 2016, just four sedition cases have seen a conviction.
  - It indicates that this law is being highly misused to silence dissent in this authoritarian manner.

Use of Unlawful Activities (Prevention) Act (UAPA):

- UAPA is an anti-terror legislation that seeks to designate an individual as a "terrorist".
- It defines **"terrorist act"** as any act committed to threaten the unity, integrity, security or sovereignty of India or to strike terror in any section of people.
- Being such a broad and vague definition of terrorist act, it has been argued that it is continuously used to target dissent against the government.
- True to its fear, a total of 3,005 cases were registered in the country under Unlawful Activities (Prevention) Act (UAPA) in 2016, 2017 and 2018, and 3,974 people were arrested under the Act.
- In the recent past, the UAPA has been invoked against activists arrested in the Elgar Parishad-Bhima Koregaon case, against at least two journalists in Kashmir and against many activists in the Delhi riots cases.
- **However, again, only 2.2% of cases** registered under the Unlawful Activities (Prevention) Act between the years 2016-2019 **ended in convictions** by court.
  - This again shows how this law is being misused to curb freedom of speech to silent critics of the government.

Curbs on freedom of the press and social media:

- Government through censorship and threats of prosecution have continued to prevent critical reporting of important national issues.
- Recently, at least eight senior journalists who reported about the deaths in the farmer's protest during Republic day violence has faced criminal charges for sedition and communal disharmony.
- The government has begun to censor content on social media pages run by newspapers and websites through removal requests.
  - It has also given warnings to social media platforms operating in India to follow the law of the land or face the arrests of employees.
- **Press Freedom Index:** Consequently, India dropped two places on the global press freedom index in 2020 ranking to 142nd place in the list of 180 countries.

Internet Shutdowns to curb freedom of expression:

- **Right to Internet:** The Supreme Court in January 2020 had

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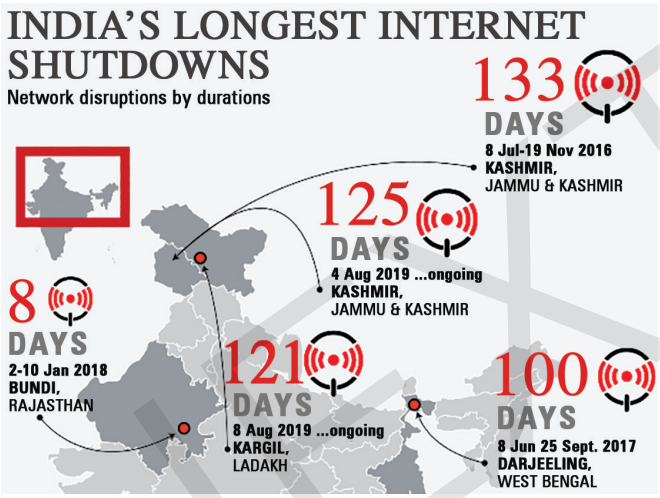
clarified that expressing one's views and practicing any profession through the internet are protected rights under Articles 19(1)(a) and 19(1)(g).

- **However, India shuts down Internet services more than any other democracy** in the world to ensure the information is not dissipated and the protests movement are curbed at the origin itself.
- **Indian laws have vague provisions** for suspending telecommunication services, including the Internet, during times of public emergencies, or, if required, for protecting 'public interest' which is frequently misused.
- **The past four years have seen over 400 such shutdowns.**
  - Many parts of Jammu and Kashmir recently saw a partial restoration of digital services after a long period of 223 days — the longest Internet shutdown across the world — since the abrogation of Article 370 in the erstwhile State.
  - Internet was shutdown recently during farmer's protest in many regions of Delhi NCR.



The Fallouts of Internet Shutdown

- An internet shutdown is a highly disproportionate response, since it affects everyone who uses the internet for professional reasons, for communicating with family or friends, for access to education, medical facilities and so on.
- According to tech company Top 10 VPN, internet shutdowns cost the country almost $2.8 billion in 2020.

Insensitive judicial approach:

- Recently, the Madhya Pradesh High Court in a bail hearing by a comedian, where courts typically are not to determine the guilt of the accused said: "Such people must not be spared."
- Bail applications or petitions to quash criminal charges of numerous authors, students and journalists, including Sudha Bharadwaj, Varavara Rao and Anand Teltumbde have been rejected by the Supreme Court.
- Even at the time of a global pandemic, the Supreme Court refused to restore 4G Internet in parts of Jammu and Kashmir.
- **The courts themselves, are seen initiating contempt of court** proceedings against comedians and lawyers. This is done to prevent them from prevent them from undermining the dignity of the court.
- Thus, India has seen rising curbs on freedom of speech. However, solely the government can't be blamed for taking such suppressive measures.
- In this era of interconnected world and rapid information travel, the state too faces a lot of challenges like fake news, polarization by violent extremists and anti- national activities.

Arguments in Favor of the Government's Strict Approach:

Rising post-truth, fake news and misinformation

- **Spread of fake news** is hitting a new high in India with every major event - from the general elections and Pulwama attacks to scrapping of Article 370 and protests against the Citizenship Amendment Act and ongoing farmer's protests - triggering extensive distribution of misinformation across social media platforms.
- **Post-Truth** - India is entering a phase in misinformation which is intended to be affective around identity and emotion rather than instrumental facts that can be scientifically verified.
- **Even during Covid19, several fake news** on corona cure and attacks by Muslims on doctors etc. spread at alarming rate and affected people emotionally and mentally.
- **Deep fakes** add a whole new level of danger to disinformation campaigns. These are fake videos or audio recordings that look and sound just like the real thing.
  - A few quality and highly targeted disinformation campaigns using deep fakes can widen the divides between peoples in democracies even more.
  - It can cause unimaginable levels of chaos, with increased levels of violence, damage to property and lives.

Threats from anti-national elements:

- Nation-state actors, ideological believers, violent extremists, and economically motivated enterprises manipulate the information ecosystem to create social discord, increase polarisation, and in some cases, influence the outcome of an election.
- **Greta Toolkit case** – It is a clear example how non-state actors can fuel discord and violence in a nation solely for their ideological propaganda. It is believed that pro-Khalistani organisations were believed to be behind the republic day protests which led to violence.

Article 19 of Indian Constitution

Six freedoms are granted to any citizen in the country, as provided in Article 19(1)

- Freedom of speech and expression
- Freedom to assemble peacefully without arms
- Freedom to form associations or unions
- Freedom to move freely throughout India
- Freedom to reside and settle in any part of India
- omitted
- Freedom to practice any profession or to carry on business, occupation or trade

The Grounds for Restrictions of Freedom

Clause (2) of Article 19 of the Indian constitution imposes certain restrictions on free speech under following heads:

I. Security of the State
- The term security of state has to be distinguished from public order. For security of state refers to serious and aggravated forms of public disorder, example rebellion, waging war against the state, insurrection etc

II. Friendly relations with foreign States
- This ground was added by the Constitution (First Amendment) Act of 1951

III. Public order,
- This ground was added by the Constitution (First Amendment) Act, 1951. As per the SC, public order is different from law and order and security of state.
- The expression 'public order' connotes the sense of public peace, safety and tranquillity. Anything that disturbs public peace disturbs public order. But mere criticism of the government does not necessarily disturb public order.

IV. Decency and morality,
- Decency and morality section 292 to 294 of the I.P.C provide instances of restrictions on the freedom of speech and expression on the grounds of decency and morality. The standard of morality changes with changing times.

V. Contempt of court,
- The expression Contempt of Court has been defined Section 2 of the Contempt of Courts Act, 1971. The term contempt of court refers to civil contempt or criminal contempt under the Act.

VI. Defamation,
- Defamation is a crime in India inserted into Section 499 and 500 of the I.P.C.
- Right to free speech does not mean freedom to hurt another's reputation which is protected under Article 21 of the constitution.
- Although truth is considered a defence against defamation, but the defence would help only if the statement was made for the public good.

VII. Incitement to an offence, and
- This ground was also added by the Constitution (First Amendment) Act, 1951.

VIII. Sovereignty and integrity of India.
- This ground was added subsequently by the Constitution (Sixteenth Amendment) Act, 1963.

Thus, all the stakeholders – the government, media, citizens, judiciary - need to be responsible in ensuring that right to freedom of speech is upheld in its true form for improving people's lives and for preserving healthy democratic societies.

Evolution of Freedom of Expression in India:

- In the colonial era, the British Empire's actions curtailed the Indian masses' freedom of expression and speech.
- The British took every practicable step, from the Sedition laws introduced by the English in 1870 to curtailing opinion-making among Indians in order to counter the nationalist feelings that exist among the masses to an independent battle.
- The framers and the architects of the Constitution of India borrowed the idea of freedom of speech from the democratic ideas laid in the American Constitution to ensure.
  - Active participation in democracy
  - Expression of beliefs and attitudes in multicultural society
  - Self-fulfillment and development through ideas exchange
  - Open discussions to discover truth and facilitate healthy decision making.
- The Constitution (First Amendment) Act, amended the Constitution to bring in the "reasonable restrictions" and several successive amendments by various governments have tried to make a fair balance between rights and responsibilities.
- Over the years, judicial creativity, judicial wisdom and judicial craftsmanship have widened the scope of freedom of speech & expression by including in several other aspects.

Way Forward:

Government

- There should be clear procedural guidelines to law enforcing agencies while charging under sedition and UAPA laws and they need to be held accountable for their action.
  - Higher standards of proof must be applied for conviction and there must be provisions like compensation to victims or punishment/enquiry against those who bring malicious complaints.

Some Landmark Judgements on Freedom of Speech

Freedom of Press

- Freedom of the press is essential to freedom of expression, which forms the backbone of political freedom and genuine functioning of democracy.
- In the case of **Romesh Thappar v. State of Madras**, the court affirmed that the enforcement of pre-censorship on a journal constituted an infringement on the freedom of the press.
- **In Indian Express Newspapers v. Union of India,** The Court confirmed that freedom of the press plays a very important role for the proper functioning of democracy.
- In **Benet Coleman and Co. vs. Union of India**, SC held that the constraint of the permissible number of pages in the newspaper is not a reasonable restriction.
- In the case of **Prabhu Dutt vs. Union of India**, it was claimed that the right to know about the news and details related to government's administration is included in the freedom of press.

Right to Broadcast

- With the introduction of technology, Courts have acknowledged the modern aspects of freedom of speech and expression. That is, the right to broadcast and advertise.
- **In Odyssey Communications (P) Ltd. v. Lokvidayan Sanghatana**, the Supreme Court ruled that the privilege of a person to display films on the Doordarshan- State Channel is part of the fundamental right provided by Article 19(1)(a).

Right to information

- After the enactment of the Right to Information Act 2005, **in the case of Secretary-General, Supreme Court of India v. Subhash Chandra Agarwal**, the court reiterated that, according to Article 19(1)(a), the right to information is not a legislation but a constitutional guarantee.
- The **Supreme Court in Union of India v. Assn. for Democratic Reforms** stated that the freedom to transmit and acquire information pursuant to Article 19(1)(a) is necessary.
- In the case of **Dinesh Trivedi, M.P. and Ors. v. Union of India**, The Supreme Court affirmed that citizens are entitled to know about the affairs of the government which they elect.

Right to criticize

- In the case of **S. Rangarajan v. P. Jagjivan Ram**, it was affirmed that it is appropriate to form and convey an opinion in a manner which does not cause defamation to the other individual to whom such critique is addressed.
- The decision added that democracy calls for open discussion and policy criticism.

Right to expression beyond national boundaries

- In the case of **Maneka Gandhi v. Union of India,** the Supreme Court comfirmed that freedom of speech and expression was not limited by geographical limitations or boundaries.
- It claimed that Article 19(1)(a) encompasses both the right to speak and the freedom to express in India and also in abroad.

Right to refuse to speak or Right to silence

In the case of **Bijoe Emmanuel v. State of Kerala**

- The school dismissed three students for their denial to sing the national anthem. Yet when the national anthem was playing, the children took a stand in respect.
- The Supreme Court held that the students had committed no offence under the Prevention of Insults to the National Honour Act of 1971.
- It further stated that the dismissal of school children for not singing the national anthem created a violation of their right to freedom of expression.

- It needs to ensure that the laws are not twisted, misused or abused in such a manner that citizens are deprived of fundamental rights that impact the liberty of an individual.

Press and Social Media Platforms

- Media should resolve to dedicate itself to a new TRP philosophy — the promotion of Truth in a Responsible and Professional manner.
- It should cover sensitive cases in a responsible manner and must adhere to core principles like accuracy, transparency, fairness and impartiality.
- Social media platforms need to eliminate fake news from their platforms through fact checkers and various awareness programs and measures.
- They should abide by the law and coordinate with the government in dealing with matters of national interests.

Judiciary

- It should accept constructive criticism to strengthen itself by heightened scrutiny and should uphold constitutional provisions protecting free speech without getting influenced by majority.

Conclusion:

- There is no doubt that the fundamental right to free speech is extremely important for any civilized democracy to survive.
- Similarly, the right to protest peaceably and without arms and question government and its policies is also an equally important fundamental right guaranteed to all of us under the Constitution.

■■■■

In-Depth
Article

UNDERSTANDING THE STATE OF MENTAL HEALTH IN INDIA

Social Justice and Empowerment (SJE) Ministry's mental health helpline Kiran sees most calls from men

About:

- **The Kiran helpline (1800-599-0019)** of the Department of Empowerment of Persons with Disabilities (DEPwD) of the Ministry was launched in September 2020.
- From Sep 2020 to Jan 2021, around 14000 new calls were made, of which 70.5% were from males and 29.5% from females.
- Majorly the challenges faced by the callers were related to anxiety (28.5%) and depression (25.5%)
- The majority of callers (75.5%) were in the age group of 15 to 40 years, while 18.1% were older, in the 41 to 60 age group.
- Around 32% of the callers were students.

Understanding Mental health:

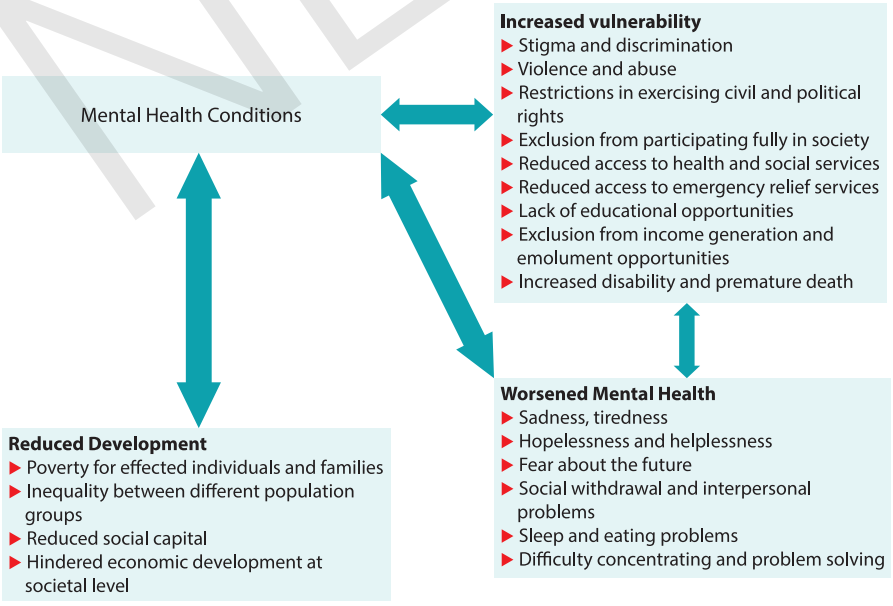
- Mental health is an integral part of health; it is more than the absence of mental illnesses.
- Concepts of mental health include subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and recognition of the ability to realize one's intellectual and emotional potential.
  - It thus includes mental well-being, prevention of mental disorders, treatment and rehabilitation.
- It has also been defined as a state of well-being whereby individuals recognize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities

MENTAL HEALTH AND SUSTAINABLE DEVELOPMENT GOALS

- Within the health related SDGs, two targets are directly related to mental health and substance abuse.
- **Target 3.4** "By 2030, reduce by one third premature mortality from Non communicable diseases through prevention and treatment and promote mental health and well-being".
- **Target 3.5** requests that countreis: "Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol."

The rising menace of Mental Illness:

- The World Health Organization (WHO) defines a mental illness as a health issue that is associated with changes in thoughts, emotions, behaviour and relationships with others.
- According to an estimate by the WHO, mental illness makes about 15% of the total disease conditions around the world.
- The world is facing a challenge in the form of mental illness - be it autism and intellectual disability in childhood, adult conditions such as depression, anxiety, substance abuse, and psychosis or dementia in old age.
- Mental health is thus being recognised as one of the priority areas in health policies around the world and has also been included in the Sustainable Development Goals.


Mental Health Conditions
Increased vulnerability
Stigma and discrimination
Violence and abuse
Restrictions in exercising civil and political rights
Exclusion from participating fully in society
Reduced access to health and social services
Reduced access to emergency relief services
Lack of educational opportunities
Exclusion from income generation and emolument opportunities
Increased disability and premature death
Worsened Mental Health
Sadness, tiredness
Hopelessness and helplessness
Fear about the future
Social withdrawal and interpersonal problems
Sleep and eating problems
Difficulty concentrating and problem solving
Reduced Development
Poverty for effected individuals and families
Inequality between different population groups
Reduced social capital
Hindered economic development at societal level

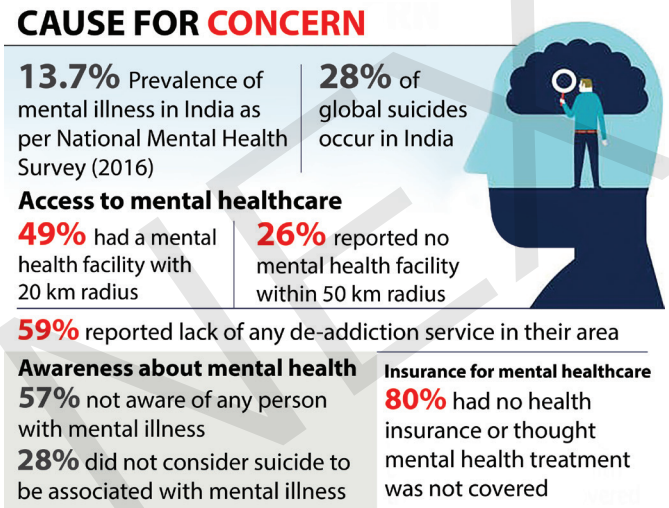
Burden of mental health problems in India:

- As per WHO, India has one of the largest populations affected from mental illness.
  - In 2019, it had estimated that 7.5% of Indians were affected by mental health disorders and labelled India as the world's 'most depressing country.

NEXT IAS

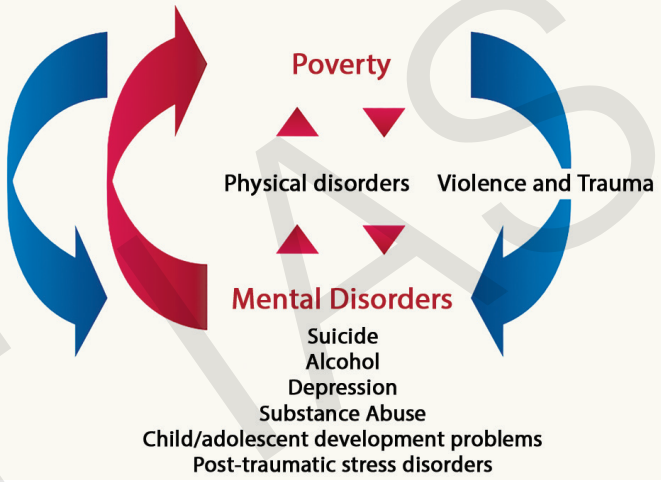
- WHO estimates that the burden of mental health problems in India is 2443 disability-adjusted life years (DALYs) per 10000 populations; the age-adjusted suicide rate per 100000 population is 21.1.
  - DALYs represent the total number of years lost to illness, disability, or premature death within a given population.
- The economic loss due to mental health conditions, between 2012-2030, is estimated at USD 1.03 trillion.

- According to the Global Burden of Disease Study by Lancet
  - Between 1990 to 2017, one in seven people from India have suffered from mental illness ranging from depression, anxiety to severe conditions such as schizophrenia.
  - In 2017, there were 197·3 million people with mental disorders in India, comprising 14·3% of the total population of the country.
  - India's contribution to global suicide deaths increased from 25·3% in 1990 to 36·6% in 2016 among women, and from 18·7% to 24·3% among men.
- National Mental Health Survey 2015-16 revealed that 9.8 million teenagers in the age group 13-17 years suffer depression and other mental health disorders and are "in need of active intervention".


CAUSE FOR CONCERN
13.7% Prevalence of mental illness in India as per National Mental Health Survey (2016)
28% of global suicides occur in India
Access to mental healthcare
49% had a mental health facility with 20 km radius
26% reported no mental health facility within 50 km radius
59% reported lack of any de-addiction service in their area
Awareness about mental health
57% not aware of any person with mental illness
28% did not consider suicide to be associated with mental illness
Insurance for mental healthcare
80% had no health insurance or thought mental health treatment was not covered

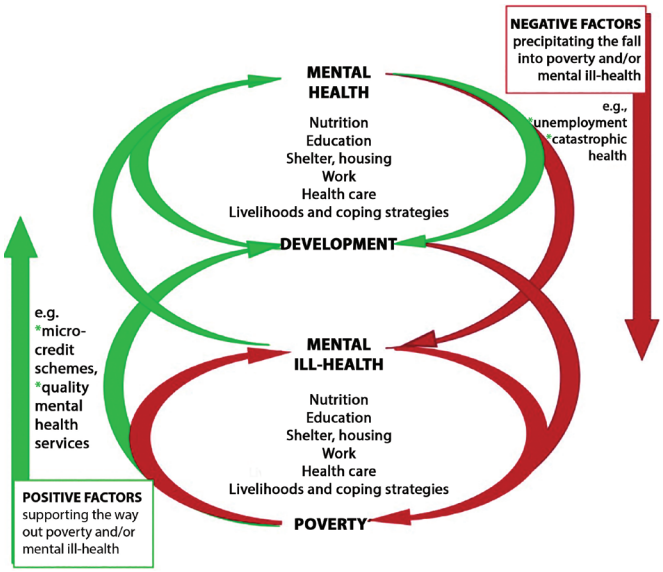
Socio-Economic Impacts of Mental disorders:

- Mental health problems affect society as a whole, and not just a small, isolated segment.
- They affect everyone, irrespective of age, gender, residence and living standards.
  - No group is immune to mental disorders, but the risk is higher among the poor, homeless, the unemployed, persons with low education, victims of violence, migrants and refugees, indigenous populations, children and adolescents, abused women and the neglected elderly.
- Persons with mental disorders are known to be associated with a wide range of social and societal problems.
  - They are implicated not only in lower productivity and earning potential, but also in a number of antisocial behaviours, crime, homelessness, domestic violence, alcohol and drug use.
  - They are associated with a considerable amount of stigma in Indian society, leading to neglect and marginalisation and violation of their human rights.



- **Poverty-Mental Illness-Homelessness interdependency** – There is a close link between poverty and mental illness and the relationship is cyclical
  - Those experiencing debt and hunger, poverty, overcrowded housing are more likely to suffer from common mental disorders due to build-up of continuous stress.
  - Mental illness affects an individual's ability to carry out essential aspects of daily life (self-care, household management, employment) in addition to preventing individuals from maintaining stable relationships (caregivers, friends, family) thereby further leading to homelessness.
- **Lifelong Impact** - Mental problems of a chronic nature, result in a lifelong impact. This impact lasts for a protracted period, gradually resulting in a poor quality of life for such individuals and their families.
- **Economic impact –** Mental disorders impose a range of costs on individuals, households, employers and society as a whole.
  - **Earning potential** - The impact of mental illness is acknowledged to be high due to the nature, duration, and impact of illness affecting growth, productivity and the earning potentials of individuals.
  - **High cost of care –**
    - Poor availability and accessibility of quality care due to limited awareness and investments have pushed the costs of care of mental health compared to other diseases.

- Also, it necessitates the informal care giving from the family and friends.



Current policies and laws on Mental Health in India:

- India launched the National Mental Health Programme (NMHP) in 1982 to prevent and treat mental and neurological disorders and their associated disabilities. It had three components
  - Treatment of Mentally ill
  - Rehabilitation
  - Prevention and promotion of positive mental health
- District Mental Health Program (DMHP) was launched under NMHP in the year 1996 to
  - Decentralise treatment and provide mental healthcare integrated with general healthcare within the community itself i.e., at the district, block and PHC levels, under supervision of a district team
- The National Mental Health Policy was introduced in 2014 which upholds a participatory and rights-based approach for quality service provisions for mental disorders
- The Mental Healthcare Act, 2017 provides the legal framework for providing services to protect, promote and fulfil the rights of people with mental illnesses.
  - It replaced the Mental Healthcare Act of 1987.
  - It has also decriminalized suicide.
- Rights of Persons with Disabilities Act of 2016 includes Mental Behaviour (Mental Illness) as a disability which further boosts rights of people with mental disorders.
- The child health programme under the National Health Mission and the National Adolescent Health Programme include components to address the mental health of children and adolescents.
- The Ayushman Bharat (Healthy India) initiative launched in 2018 that aims to provide comprehensive primary health care and health insurance coverage for non-communicable diseases also include mental disorders.
- Health and Wellness Centres are efforts to provide quality care at the primary health care level even for the mentally ill people.
- Deaddiction centres and rehabilitation services are also available.
- All these initiatives are in line with the United Nations Convention on Rights of People with Disabilities (UNCRPD).

Challenges India faces in curbing Mental Illness:

- **Poor Implementation** - Despite various efforts by the government, poor implementation of mental health services in India has been documented.
  - Also, high treatment gap for mental disorders, poor evidence-based treatment, and gender-differentials in treatment is witnessed.
- **DMHP has a limited reach –**
  - Despite 3 decades of implementing the NMHP, the proportion of districts covered by it ranged from 13.64% in Punjab to 100% in Kerala.
  - Only 1/3rd of the surveyed states had more than 50% of the population covered by DMHP.
- **Shortage of Quality Mental Health Personnel –**
  - In India, there exists just two mental health workers and 0·3 psychiatrists per 100000 population, which is much lower than the global average.
  - Health workers have a discriminatory attitude towards people with mental illness.
  - Demand-side barriers such as low perceived need for care, paucity of knowledge of mental disorders, and stigma attached to mental disorders exists.
- **Lack of data on mental healthcare professionals –**
  - The data regarding the number of registered mental health professionals in the country including psychiatrists working in government and private sectors is not maintained centrally.
  - This is despite the directions to do so in Mental Healthcare Act 2017.
- **Lack of funds –** Although the world's fifth largest economy, India has spent only 0.05 percent of its health budget annually on mental health over the last few years.
- **Ignorance and Lack of awareness –**
  - Despite the unused funds set aside in its budget for mental health, the government doesn't organize any major awareness programs even on World Mental Health Day
  - Mental health is never an issue in any election and has rarely found mention in the election manifesto of any political party in India.

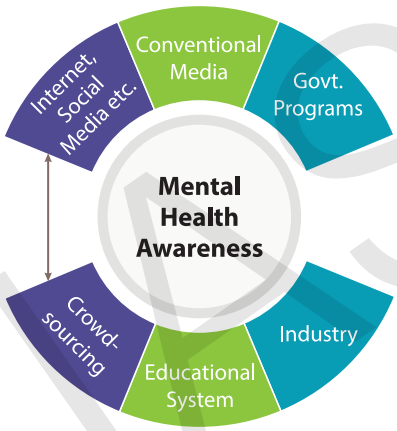
- There is a big stigma around people suffering from any kind of mental health issues and are often tagged as 'lunatics' by the society.
- This leads to a vicious cycle of shame, suffering and isolation of the patients deteriorating their mental disorder.

How covid 19 made mental illness more challenging and made us sensitive towards it?

- The year 2020 has given a new paradigm to mental health issues as the global workforce was put under mandatory lockdown.
- As per WHO, a survey of 130 countries has shown that the Covid pandemic had a devastating effect on mental health.
- After the pandemic began, there were many reports of people suffering from increased stress, anxiety, depression, insomnia, denial, anger and fear in India.
- Mental health issues in the context of Covid-19 are more complex and challenging due to
  - a large proportion of socially and economically vulnerable population,
  - high burden of pre-existing mental illness,
  - constrained mental health services infrastructure,
  - less penetration of digital mental health solutions, and
  - the scare created due to misinformation on social media
- In addition, new patients were turned away from under-resourced hospitals for lack of beds, even as institutions were unable to discharge recovered patients so they could go home with their families due to fear of coronavirus.
- Homeless or wandering persons with mental illness brought to institutions by the police or under magistrates' orders were both vulnerable to and a source of COVID-19 infections, and a challenge to treat when infected.
- In response, the Centre announced intervention strategies, telepsychiatry consultations and toll-free numbers like Kiran helpline for psychological and behavioural issues. These need to be expanded and made more accessible.

Way Forward:

- Raising awareness and mobilizing efforts in support of mental health is necessary for addressing the situation.
  - Communities and societies have an important role in addressing mental health by reducing stigma and discrimination, raising awareness, and promoting inclusion.
  - The need of the hour is to provoke masses/communities to learn about mental health through campaigns like Swach Mansikta Abhiyan.
  - A peer network needs to be formed to connect the patients with each other so that they could listen and support each other.
  - This will help them address mental issues in a timely and effective manner and live a stress-free life and will also sensitize the community/society.
  - These measures will also encourage people to talk about their mental well-being and reach out to a therapist or psychiatrist, in case they need to do so.
  - Use of internet, social media and partnering with industries can help achieve it in an effective manner.



- Mental health situation in India demands active policy interventions and resource allocation by the government.
  - Appropriate national mental health policies and legal frameworks are imperative for effective management of mental health disorders
  - It calls for
    - Strengthening of National Mental Health Programme and District Mental Health Programme
    - Comprehensive strategies for promotion, prevention, treatment and recovery through a whole-of-government approach.
    - Increase in budget allocation for mental health
    - An integrated approach to detect, treat, and manage patient needs related to mental and physical health is urgently needed
  - Policy makers should be encouraged to promote availability of and access to cost-effective treatment of common mental disorders at the primary health care level.
  - Task-sharing with non-specialists and appropriate training of community health workers can improve mental health service provision
    - The model of ASHA workers to educate and sensitize women and children about mental disease need to be scaled up.
  - An independent statutory National Psychology Council can go a long way in standardising training and certifications for all psychology and allied professionals.
    - It would also help in providing adequate number of quality mental health personnel.

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Feature Article

COMMON ADMISSION TEST FOR CENTRAL UNIVERSITIES

The Ministry of Education has set up a seven-member committee to consider the prospects of holding a common entrance test for admission to undergraduate colleges across all Central universities.

About:

- **The committee is set up** to recommend modalities for high-quality aptitude test for admission to undergraduate programmes of central universities under the **chairmanship of R.P. Tiwari.**
- **The National Testing Agency (NTA)** will bear the responsibility of conducting at least twice a year for admission to Central universities on the following topics:
  - A common aptitude test
  - A common exam for a discipline

APTITUDE TEST MUST FOR ALL

Common entrance exam for central universities from 2021-22

- 7-member committee for central universities for common entrance exams set up by UGC
- Admission for 2021-22 for UG programmes in central universities based on the test
- The exam will be computer-based
- **Format:** Aptitude and subject specific
- **Aptitude:** Verbal, Quantitative, Logic & Reasoning
- Aptitude test is mandatory for all aspirants
- Aspirants will be able to choose the subject(s) of their choice

Significance:

- **The New Education policy** rules in the favour of reducing entrance exams for admission to colleges to eliminate the mushrooming of coaching institutes for preparing students taking these competitive exams.
- The common entrance will help in moving away from unrealistic cut-off marks that colleges put up for admission to their Under Graduate courses.
- **Uniformity and quality:** It would not only bring a uniform platform for all but is also expected to reduce the dependence on Class 12 board examinations.
  - Hence, it will also help in reducing rote learning.
- **Accessibility:**
  - **Online process and one common exam** will do away with the need to travel to great lengths to sit for different entrance exams and the need to apply separately at different institutes.
- **Transparency:** It will also make the selection process transparent and may help in getting the academic cycle back on track in lesser time.
- It will eliminate the need to conduct multiple admission and entrance exams.
  - It would thus save funds for the central government by having a single test.
  - It will also help universities to acquire nationalistic character as it will have students applying from far end states too.

Challenges:

- Given the range of subjects offered across central universities, it will be a challenge to identify the disciplines for which separate tests will be needed.
- It will be difficult to get all the universities to agree to a common entrance test as they would want to follow their entrance procedures to maintain a certain quality level for their entrance admission.
- Universities will have to compete to attract talent, and this would also influence their rankings as students will make choices based on parameters like faculty, facilities, research, and placement.
- There are also logistical problems with conducting such an exam for millions of students in the online mode. We need a huge efficient infrastructure to have at least one examination centre for more than 700 districts across the country.

Way Forward:

- The common entrance test is a very important aspect that is set to change the way admissions will happen to central universities.
- The idea being worked upon is to go ahead and test the aptitude, interest and basic knowledge of the students rather than going for the mad race for marks that students have secured in their board exams.

National Testing Agency (NTA)

- It is an independent, autonomous and self-sustained premier testing organization under Society Registration Act 1860.
- It was established for conducting efficient, transparent and international standards tests to assess the competency of candidates for admission/fellowship in higher educational institutions.

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Feature Article

INDIA'S NATIONAL HYDROGEN MISSION

India has proposed a National Hydrogen Mission (NHM) that will draw up a roadmap for using hydrogen as an energy source.

About:

- Hydrogen produced from renewable sources has many uses and can help steer the world towards a cleaner future.
- But the approach to making hydrogen thus far has relied on fossil fuels.
  - **Green hydrogen - The proposed mission** aims to change this and generate hydrogen from green power sources.
- **Thus, a policy will soon be drafted** for using hydrogen as an energy source with special focus on green hydrogen.
  - It will thus dovetail India's growing renewable capacity with the hydrogen economy.
- **Fund Allocation:** The government has allocated Rs. 1,500 crores for renewable-energy development and Hydrogen Energy Mission.
  - For the current financial year, MNRE has been allotted Rs 25 crore for research and development (R&D) in hydrogen.

Hydrogen as fuel:

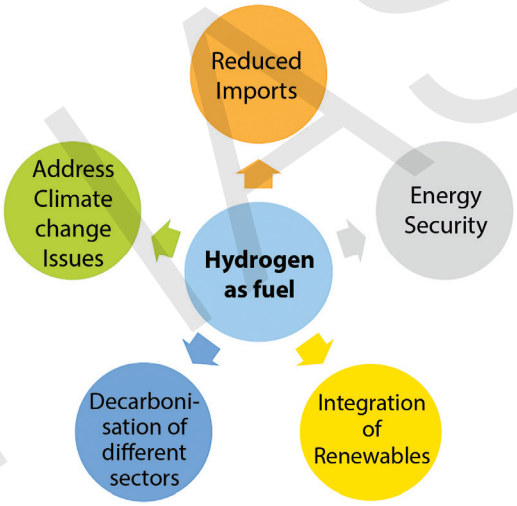
- **Hydrogen is a promising energy carrier**, which has the potential to address several energy sector related challenges.
- **Substitution:** It has the potential to substitute the conventional fuels and reduce the CO2 related emissions significantly at the point of use.

TYPES OF HYDROGEN

- **Grey Hydrogen**
  - It constitutes India's bulk production and is extracted from hydrocarbons (fossil fuels, natura gas)
  - It gives CO2 as by product.
- **Blue Hydrogen**
  - It is also sourced from fossil fuels.
  - However, emissions/ by-products (CO, CO2) are captured and stored.
  - Thus, it is better than grey hydrogen.
- **Green Hydrogen**
  - It is generated from renewable energy sources such as solar and wind.
  - The electricity splits water into hydrogen and Oxygen.
  - It gives water and water vapour as by-products.
  - Thus, it is the best and cleanest type.

- Further, **if green hydrogen** is used as fuel, then there is capability to decarbonize the entire value chain, enabling reduced emissions and climate change threats.
- It can provide linkages between energy supply and demand, in both a centralized or decentralized manner, thereby enhancing the overall energy system flexibility.
- This low carbon energy source can be connected to sectors like transport and buildings and even steel and cement industry.

Significance for India



- **Decarbonisation:** Hydrogen energy can provide impetus to India's aim to decarbonise by 2050 and attain 175 GW of renewable energy capacity by 2022.
  - India's electricity is heavily coal-dependent. Hydrogen will thus replace fossil fuels and will address pollution levels and oil-price hike.
- **Less Green House Gas:** It will benefit India's transportation sector (which contributes 1/3 of India's greenhouse-gas emissions), iron and steel and chemical sectors.
- Thus, with appropriate capacity addition to renewable power generation, storage and transmission, producing green hydrogen in India can become cost effective which will not only guarantee energy security, but also ensure self-sufficiency gradually.

The case for green hydrogen:

- Green hydrogen has specific advantages.
- It is a clean burning molecule, which can decarbonise a range of sectors including iron and steel, chemicals, and transportation.
- Renewable energy that cannot be stored or used by the grid can be channelled to produce hydrogen.

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- This is what the government's Hydrogen Energy Mission, to be launched in 2021-2022, aims for.

Hydrogen energy initiatives in India:

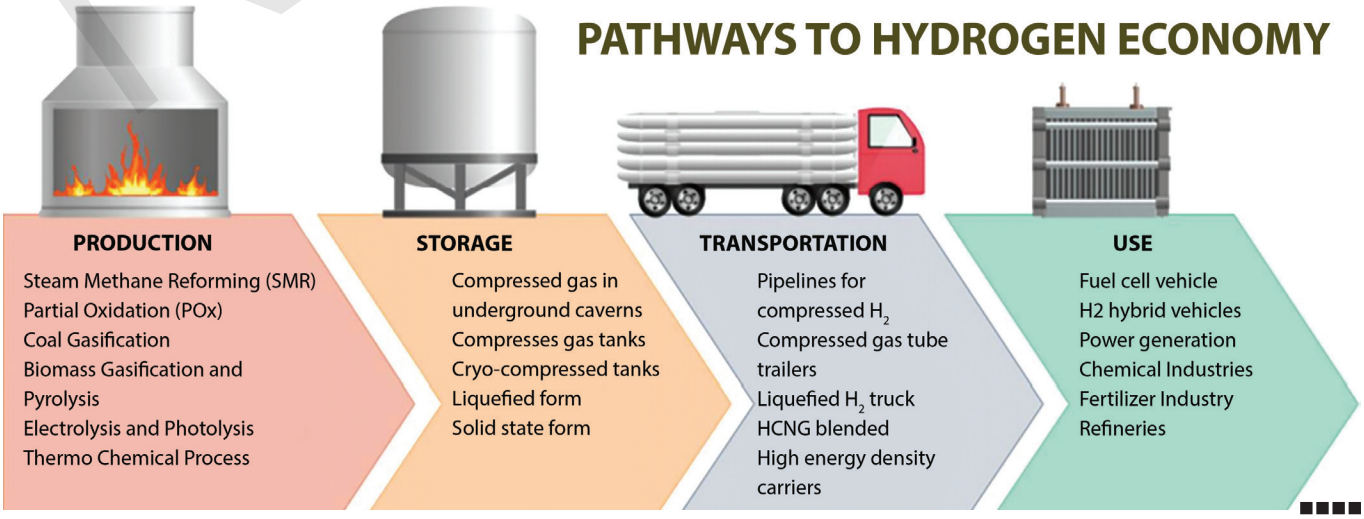
- **India is already keen** on developing a hydrogen economy owing to its favourable geographic conditions and presence of abundant natural elements.
- **Hydrogen is already used extensively** in India in the chemical and petrochemical sectors
  - It is mainly used as an industrial feedstock in the creation of ammonia-based fertilisers.
- **About six million tonnes of hydrogen** is produced in India annually, according to an estimate by The Energy and Resources Institute (TERI).
- **Mission Innovation Renewable and Clean Hydrogen Challenge:** India is a participant (among 16 nations or groupings) in this mission.
- **India is a part of 'Hydrogen Valley Platform'** that looks to create an integrated hydrogen ecosystem covering production, storage, distribution and end use.
- **Long history:** The Ministry of New and Renewable Energy (MNRE) has seen hydrogen as an area of strategic interest since at least 2006, when the first Hydrogen and Fuel Cell Roadmap was launched (MNRE, 2006).
- **Recent Plan:** More recently, in 2016, MNRE published a report laying out a comprehensive plan for increasing R&D activity.
  - This included significant funding for different electrolyser technologies and their integration with renewable electricity sources, which has strong potential in India given the cost and availability of renewable electricity.
- **Pipeline Infrastructure:** Also, the government has given impetus in scaling up the gas pipeline infrastructure across the country and has introduced reforms for the power grid, including smart grids.
  - Such steps are being taken to effectively integrate renewable energy in the present energy mix.
  - Hydrogen as a fuel can further give a boost to clean energy.

Policy Challenges:

- One of the colossal challenges faced by the industry for using hydrogen commercially is the economic sustainability of extracting green or blue hydrogen.
- The technology used in production and use of hydrogen like carbon capture and storage (CCS) and hydrogen fuel cell technology are at nascent stage and is expensive which in turn increases the cost of production of hydrogen.
- The maintenance costs for fuel cells post-completion of a plant can be costly.
- The commercial usage of hydrogen as a fuel and in industries requires mammoth investment in R&D of such technology and infrastructure for production, storage, transportation and demand creation for hydrogen.

Way Forward:

- The NHM should aim to establish appropriate physical infrastructure and legal framework for the usage of hydrogen as the private industry has already been working on hydrogen projects unregulated.
- Currently, multiple regulatory authorities regulate hydrogen use which being a versatile resource can be used as a transport fuel (Ministry of Road), generate electricity (Ministry of Renewable Energy), can be transported via pipelines (Ministry of Petroleum and Natural gas) and is highly flammable.
  - Thus, the NHM needs to ensure coordination among the various ministries and regulators.
- The draft regulations for NHM shall have a roadmap for targets and capacity installation.
  - Designated hydrogen hubs can be established to attract investment by providing infrastructural support like pipelines and renewable electricity for production, storage and transportation of green hydrogen.



Feature Article

DIGITAL LITERACY IN INDIA

Kerala Government has announced a digital media literacy programme called 'Satyameva Jayate' (Truth alone triumphs) to counter fake news.

About:

- **The programme 'Satyameva Jayate'** would be taught at schools and colleges, which would be encouraged to develop curriculum on **digital media literacy**.
- It will help people understand the laws and benchmarks which control social media and the internet.
- It will also help them to distinguish between truth and untruth.

Digital literacy and its significance:

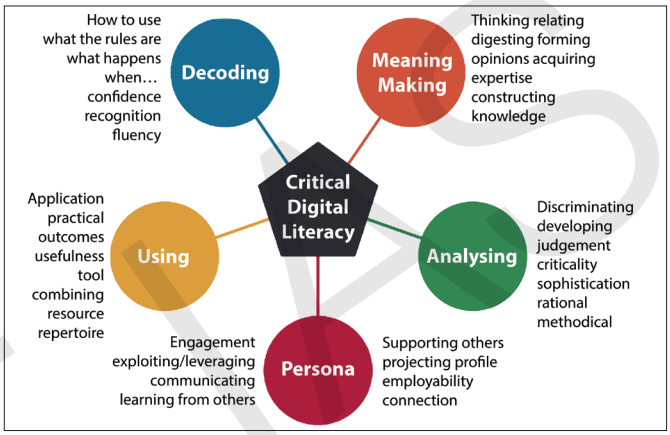
- **Digital literacy** is the ability of individuals and communities to understand and use digital technologies for meaningful actions within life situations.
- It is the ability to find, evaluate, utilize, share, and create content using information technologies and the Internet.

Significance of digital literacy:

- Digital literacy has implications beyond access to government services. It allows people to access information and services, collaborate, and navigate socio-cultural networks.
- In today's global economy, knowledge of digital processes transforms the ways in which people work, collaborate, consume information, and entertain themselves.
  - This has been acknowledged in the **Sustainable Development Goals 4 (SDG 4)** as well as by the Indian government and has led to the Digital India mission.
- Offering services online has cost and efficiency benefits for the government and also allows citizens to bypass lower-level government bureaucracy.
  - **Internet access and digital literacy** enables that access leading to inclusion of large parts of the population.

Government's initiatives to promote digital literacy:

- There are three main digital literacy programmes which have either been implemented or are in the process of implementation –
  - National Digital Literacy Mission –
    - It had been initiated with the vision to empower at least one person per household with crucial digital literacy skills by 2020.
    - It was approved in 2014 and had a target to train 10 lakh citizens in select districts.
  - Digital Saksharta Abhiyan –
    - It was approved in December 2014 with an additional target of 42.50 lakh candidates across the country.
    - The only difference between the two schemes is that in DISHA, besides common citizens; ASHA workers, government functionaries, and fair-price shop workers were trained as well.
  - **Pradhan Mantri Gramin Digital Saksharta Abhiyan** – It seeks to make six crore persons in rural India digitally literate.



However, these initiatives have suffered from various design and implementation flaws.

- These schemes require expensive IT infrastructure as well as broadband connectivity as the training is conducted on computers.
  - It ignores the easier availability of smartphones and mobile data, which would reduce the costs for the scheme and make implementation wider.
- **Struggling for funds** - The importance accorded to these initiatives in policy documents and public statements, has not been reflected in the budgets allocated year after year.
- **Lack of internet access - The Bharat Net programme,** aiming to have an optical fibre network in all gram panchayats, has consistently missed all its deadlines while the costs involved have doubled.
- Thus, while the potential benefits of these schemes are unquestionable, challenges remain, which include
  - delayed infrastructure development
  - bandwidth availability
  - personal computer penetration and
  - the capacity to scale
- As a result, India currently faces a **huge digital divide** in terms of digital literacy as shown below.

India's digital literacy ladder:

- As per a report from the Digital Empowerment Foundation in 2018, around 90% of India's population is digitally illiterate.

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- In recent times, several government and private sector services have become digital while some of them are only available online. However,
  - **According to 75th round of National Sample Survey (NSS),** while 42% of urban households have a computer with an internet connection, the same is available to only 14.9% of rural households
  - A report by Nielson in 2019 concluded that 70% of the rural population does not have an active internet facility.
- **This digital divide has led to a new kind of inequality, digital inequality**, where social and economic backwardness is exacerbated due to information poverty, lack of infrastructure, and lack of digital literacy.
  - **Digital literacy skills or the lack of them**, especially during the Covid-19 pandemic, have affected the lived realities of individuals and communities in multiple ways, across themes such as education, economic development, political participation, health, social discourse, and many more.
  - Students lacking digital skills and with no access to internet and cell phones were further deprived of quality education during the Covid.
    - They remained unaware of online schooling, Zoom classes and digital textbooks.
- The **National Education Policy 2020** advocates greater integration of technology.
  - However, India still lacks a concrete roadmap for ICT training in various proficiency levels for our diverse population segments.

Toward Equal Access:

- **Digitally-poor:** While India is experiencing a digital revolution that may allow us to move ahead in terms of economic growth and development, we also run the risking of creating a new class of digitally-poor citizens.
  - **Digital Poverty has** been defined as a new concept of poverty, meaning the inability to access and benefit from information and communications technology services due to a lack of access, and a lack of skills required to access these services.
- Digital literacy is important for people to be able to access the current internet facilities in India, as well as to drive demand for the creation of more infrastructure.
- **The Telecom Consumers Protection (Tenth Amendment) Regulations,** released by the Telecom Regulatory Authority of India in 2016 acknowledged that lack of digital literacy has led to a lack of adoption of wireless internet in India.
- Multiple United Nations documents and papers have acknowledged that aspects of digital literacy must be included as an essential part of Article 19 of the Universal Declaration of Human Rights.
- In May 2010, The European Commission released the Digital Agenda for Europe.
  - The agenda specifically identifies digital literacy as a separate initiative that is needed to ensure that everyone is able to enjoy the benefits of infrastructure creation for internet access.

Way Forward:

- India's current digital literacy schemes need an overhaul to ensure that none of our citizens suffer from digital poverty and they can be equal participants in the digital revolution that India is undergoing.
- It is suggested that the schemes should be designed as long-term initiatives, with measurable outcomes that can be consistently tracked.
- There is need to develop specific assessment standards for different user groups, on the basis of which we can assess the type of digital skills required for them, and create structured tailor-made programmes accordingly.
- There should also be a long-term policy goal of integrating the digital literacy component into general literacy and education programmes.

Conclusion:

- If India were to optimise the opportunities emerging out of the modern digital economy, we would need to leverage the full potential of our digital investments, through a standardised set of programmes implemented at various levels via the machinery of governments, corporates and education institutions.
- The post-COVID world will be more digitised than before. Those with the ability to navigate the digital landscape would get more economic opportunities and receive more avenues of social mobility than others.
- Therefore, it should be our priority to ensure basic digital literacy and Internet connectivity for every Indian.

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Feature Article

SALIENCE OF DIGITAL MEDICAL SERVICES

Use of technology and innovative tools for improvement of public health service.

About:

- Use of digital tools for providing healthcare facilities has been in discussion for long, moreover Covid-19 pandemic has re-emphasized the need of digital services in the health ecosystem.
- Recognising the importance of digital technologies in the health sector, **National Digital Health Mission has been recently launched.**
- India being a developing nation with low healthcare expenditure, lack of doctors and high out of the pocket cost for healthcare (almost 60% as per WHO), digital healthcare facilities can help India in achieving its goal of health for all.

National Digital Health Mission (NDHM)

- NDMH was launched in 2020.
- **Aim:** The NDHM aims to create a complete digital health ecosystem with its 4 key feature - health ID, personal health records, Digi Doctor, and health facility registry.
- **It aims to** connect the different touch-points of the health ecosystem, such as Health Information Provider to Health Information User to Consent Manager, through digital tools to provide affordable access to quality healthcare.
- **Implemented by:** The implementation of NDHM will be seen by the National Health Authority (NHA) under the Ministry of Health and Family Welfare.

Significance of Digital Medical Services:

- **Cost effective:** Digital facilities will require minimal physical infrastructure, moreover they would be near zero appointment cost, transportation cost and other transaction costs. Low cost would help in increasing the healthcare reach.
- **Analyzing the Spread of diseases:** Availability of data would help in determining the geo spatial presence of a disease and presence of genomic data would help in providing the information on disease transmission.
- **Patient-Friendly Healthcare:** The use of artificial intelligence tools in the health system, including triaging, diagnostics, among others, will substantially reduce time delays for patients and surety of the medical procedures will also reduce physical hardships.
- **Preventive healthcare:** Digital technologies would expedite the development of new drugs and also introduce a completely new class of therapies, known as digital therapeutics (DTx). DTx are software-based solutions that can treat disease which are linked to lifestyle or genetic issues.
- **Research and Development:** Easy transfer of digital data among research and academic institutions would reduce the duplicacy of efforts in collection of data and would also expand the research and development ecosystem in the country.

Challenges:

- **Lack of digital ecosystem:** Lack of digital connectivity, digital literacy among people, language barrier, privacy laws would impact pace of development of digital healthcare services.
- **Cost of digital healthcare services:** Unless not regulated, the issue of out of pocket expenditure would not be solved. Moreover poor health literacy among people would make them further prone to doctor hunting (irrational cost of services and healthcare tests).
- **Data Governance:** Ineffective data governance may lead to misuse of large scale data, abuse of personal data by creating profiles of people, individual privacy concerns, problem of cyber theft may deter people from adopting digital healthcare services.
- **Missing fundamental problem:** That is strengthening of primary health care. Even National Health Policy 2017 recognizes the importance of primary health care. Digital services would not be able to achieve their full potential unless there is a strong health system at primary level.

Way Forward:

- Good data governance i.e. certain check and balances so that there is no misuse of data. For that government should enact the Personal Data Protection Bill, 2019, which would help in ensuring confidence in the digital ecosystem.
- Increase in overall expenditure in healthcare (proposed 2.5%) and expanding in Research & Development of digital services would help in achieving universal healthcare for all (SDG 3).

■■■■

Feature Article

CLIMATE CHANGE REPORT ON HINDUKUSH HIMALAYAN MOUNTAINS

'Assessment of Climate Change over the Indian Region' report was released recently by the Ministry of Earth Sciences.

About:

- **Increase in temperature:** As per the report the Hindu Kush Himalayas (HKH) experienced a temperature rise of about 1.3°C during 1951–2014.
- **Increase in contrast:** While, several areas of HKH have experienced a declining trend in snowfall and also retreat of glaciers in recent decades, the high-elevation Karakoram Himalayas have experienced higher winter snowfall that has shielded the region from glacier shrinkage.
- **Future Prediction:** By the end of the twenty-first century, the annual mean surface temperature over HKH is projected to increase by about 5.2°C
- **Overall climate** along the Hindukush Karakoram region is undergoing warming at a higher rate during the winter season as compared to other seasons.
- **Reason:** Weather dynamics is intricate in the Himalayan region, arising due to extensive interactions of tropical and extratropical weather systems.

Other Key observations of the report:

- The global average temperature has risen by around 1°C since pre-industrial times.
- Emissions of Greenhouse Gases (GHGs), aerosols and changes in land use and land cover (LULC) during the industrial period have substantially altered the atmospheric composition, and consequently the planetary energy balance, and are thus primarily responsible for the present-day climate change.
- Even if all the commitments (called the "Nationally Determined Contributions") made under the 2015 Paris agreement are met, it is projected that global warming will exceed 3°C by the end of the century.
- **However, temperature rise will not be uniform** across the planet; some parts of the world will experience greater warming than the global average.

Climate Change in India: Projected Changes:

- **Temperature Rise Over India:** India's average temperature has risen by around 0.7°C during 1901–2018.
  - By the end of the twenty-first century, these temperatures are projected to rise by approximately 4.7°C and 5.5°C, respectively, relative to the corresponding temperatures in the recent past (1976–2005 average)
- **Indian Ocean Warming:** Sea surface temperature (SST) of the tropical Indian Ocean has risen by 1°C on average during 1951–2015, markedly higher than the global average SST warming of 0.7°C, over the same period.
- **Changes in Rainfall:** The summer monsoon precipitation (June to September) over India has declined by around 6% from 1951 to 2015, with notable decreases over the Indo-Gangetic Plains and the Western Ghats.
  - The radiative effects of anthropogenic aerosol forcing over the Northern Hemisphere have considerably offset the expected precipitation increase from GHG warming.
  - The frequency of localized heavy precipitation occurrences has increased worldwide in response to increased atmospheric moisture content.
- **Droughts:** Both the frequency and spatial extent of droughts have increased significantly during 1951–2016.
  - The area affected by drought has also increased by 1.3% per decade over the same period.
- **Sea Level Rise:** Sea levels have risen globally because of the continental ice melt and thermal expansion of ocean water in response to global warming.
- **Tropical Cyclones:** There has been a significant reduction in the annual frequency of tropical cyclones over the NIO basin since the middle of the twentieth century (1951–2018).
  - In contrast, the frequency of very severe cyclonic storms (VSCSs) during the post-monsoon season has increased significantly during the last two decades (2000–2018).
  - Climate models project a rise in the intensity of tropical cyclones in the NIO basin during the twenty-first century.

HinduKush Himalayan (HKH) Region

- After the North and the South poles, the Hindukush – Karakoram ranges, along with the Tibetan Plateau, hold the largest reserves of fresh water and are known as the 'Third Pole' (after the North and South Poles).
- The HKH region is spread across Afghanistan, Bangladesh, Bhutan, China, India, Kyrgyzstan, Mongolia, Myanmar, Nepal, Pakistan, Tajikistan, and Uzbekistan and it has significant implications for climate.

Way Forward:

Human-induced climate change is expected to continue apace during the twenty-first century. To improve the accuracy of future climate projections, particularly in the context of regional forecasts, it is essential to develop strategic approaches for improving the knowledge of Earth system processes, and to continue enhancing observation systems and climate models.

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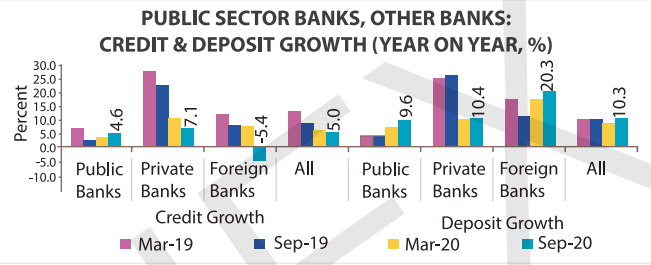
Feature Article

PRIVATISATION OF PSB AND GENERAL INSURANCE COMPANY

Recently the government announced in the Union Budget the proposal to privatize two Public Sector Banks (PSB) and one general insurance company this financial year.

About:

- The two banks that will now be privatised will be selected through a process in which **NITI Aayog will make recommendations,** which will be **considered by a core group of secretaries on disinvestment** and then the Alternative Mechanism (or Group of Ministers).
- **Final Aim:** The government envisages only a handful of state-owned banks, with the rest either consolidated with strong banks or privatized.
  - **This will free up the government**, the majority owner, from continuing to provide equity support to the banks year after year.
- Through a series of moves over the last few years, the government is now left with 12 state-owned banks, from 28 earlier.
  - In 2019, the government merged ten PSU banks into four.
  - Presently there are 12 public sector banks and 21 private sector banks in India.



History of Bank and Insurance Nationalisation in India

- State Bank of India had been nationalized in 1955 itself, and the insurance sector in 1956.
  - The business of general insurance was nationalized through The General Insurance (Emergency) Provisions Ordinance promulgated on 13 May 1971.
- Presently there is one Public sector life insurer and four general insurer companies in India.

Problems with the PSU banks:

- After a series of mergers and equity injections by the government, the performance of public sector banks has shown improvement over the last couple of years.
- **High NPA:** However, compared with private banks, they continue to have high non-performing assets (NPAs) and stressed assets although this has started declining.
  - After the Covid-related regulatory relaxations are lifted, banks are expected to report higher NPAs and loan losses.
  - As per the RBI's recent Financial Stability Report, gross NPA ratio of all commercial banks may increase from 7.5% in September 2020 to 13.5% by September 2021 under the baseline scenario (from 9.7% to 16.2% for public sector banks; from 4.6% to 7.9% for private banks).

Financial Health of the private sector banks:

- **Private banks' market share** in loans has risen to 36% in 2020 from 21.26% in 2015, while public sector banks' share has fallen to 59.8% from 74.28%. Competition heated up after the RBI allowed more private banks since the 1990s.
- **Private Banks have expanded the market** share through new products, technology, and better services, and also attracted better valuations in stock markets.
  - **E.g.** HDFC Bank (set up in 1994) has a market capitalisation of Rs 8.80 lakh crore while SBI commands just Rs 3.50 lakh crore.
- **Governance Issues:** However, in the last couple of years, some questions have arisen over the performance of private banks, especially on governance issues.
  - Some of the examples are ICICI Bank, Yes Bank and Lakshmi Vilas Bank.
  - Moreover, when the RBI ordered an asset quality review of banks in 2015, many private sector banks, including Yes Bank, were found under-reporting NPAs.

Recommendations of committees on Bank Privatisation:

- Many committees had proposed bringing down the government stake in public banks below 51% — the Narasimham Committee proposed 33% and the P J Nayak Committee suggested below 50%.
- An RBI Working Group recently suggested the entry of business houses into the banking sector. The NDA government, in its second term, has been pushing for privatisation and reducing the number of PSU banks to five or six.

Way Forward:

- Privatization of two banks and the indication of carrying it further is a major reform signalling a changing political approach. These moves, along with setting up an asset reconstruction company entirely owned by banks, underline an approach of finding market-led solutions to challenges in the financial sector.
- The challenges of bank privatization can be mitigated by a holistic regulatory and monitoring approach to be adopted by Reserve Bank of India.

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Feature Article

DISINVESTMENT

The government has approved a policy of strategic disinvestment of public sector enterprises that will provide a clear roadmap for disinvestment in all strategic and non-strategic sectors.

About:

- The government has a disinvestment target of 1.75 trillion rupees (about $24 billion) for the fiscal year 2021-22.
- The government aims at making use of disinvestment proceeds to finance various social sector and developmental programmes and to infuse private capital, technology and best management practices in Central Government Public Sector Enterprises.

Strategic Disinvestment in FY 2021-22:

Disinvestment and Strategic Sales:

- Rs. 1,75,000 crore estimated receipts from disinvestment.
- Strategic disinvestment of BPLC, Air India, Shipping Corporation of India, Container Corporation of India, IDBI bank etc. to be completed by 2021-22.
- NITI Aayog to work out on the list of CPSEs to be taken up for strategic disinvestment
- Incentivising States for disinverstment of their Public Sector Companies, using central funds.
- Introducing a revised mechanism for ensuring timely closure of sick or loss making.

Policy on Strategic Disinvestment: Major Highlights:

Two-fold classification of Sectors to be disinvested:

- **Strategic Sector:** Bare minimum presence of the public sector enterprises and remaining to be privatised or merged or subsidiarized with other CPSEs or closed. Following 4 sectors to come under it:
  - Atomic energy, Space and Defence
  - Transport and Telecommunications
  - Power, Petroleum, Coal and other minerals
  - Banking, Insurance and financial services
- **Non-Strategic Sector:** In this sector, CPSEs will be privatised, otherwise shall be closed.

Disinvestment:

- Disinvestment means sale or liquidation of assets by the government, usually Central and state public sector enterprises, projects, or other fixed assets. It is also referred to as 'divestment' or 'divestiture.'
- Apart from sale of an asset, it also refers to capital expenditure (CapEx) reductions, which can facilitate the re-allocation of resources to more productive areas.
- There are primarily three different approaches to disinvestments (from the sellers' i.e. Government's perspective)
  - **Minority Disinvestment -** The government retains a majority stake in the company, typically greater than 51%. It thus retains management control.
  - **Strategic Disinvestment/Majority disinvestment** – The government sells off a majority stake up to 50% or more. It also transfers the ownership and management control to the buying entity.
  - **Complete Privatisation** – It is a form of majority disinvestment wherein 100% control of the company is passed on to a buyer.

Benefits of disinvestment:

- **For Government**
  - **Reduce financial burden** - Raising valuable resources for the govt., which could be used to bridge the fiscal deficit.
  - **Improve public finances and fund growth** – Along with a one-time sale amount, a lot of these stake sales also result in annual revenues for the government.
  - **Developmental projects** - The government can focus more on core activities such as infrastructure, defense, education, healthcare, and law and order.
  - **Minimum Government Maximum Governance** – It leads to a leaner government with reduction in the number of ministries and bureaucrats.
- **For Markets and Economy** – The enhanced competition brings about greater efficiencies for the economy and markets as a whole.
- **For Employees** - Fresh private sector investments bring greater opportunities and avenues for career growth.
- **For the PSUs** - Greater autonomy leading to higher efficiencies.

Disadvantages of disinvestment:

- **Affects social development** - It focuses more on profit maximization and less on social objectives unlike public sector that initiates socially viable adjustments.
- **Loss of employment** - It results in high employee turnover and a lot of investment is required to train the lesser-qualified staff and even making the existing manpower of PSU abreast with the latest business practices.
- **Price rise** - It escalates price inflation in general as privatized enterprises do not enjoy government subsidies after the deal and the burden of this inflation affects the common man.
- **Lobbying and bribery** – It may provide the unnecessary support to the corruption and illegitimate ways of accomplishments of licenses and business deals amongst the government and private bidders.

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Feature Article

RETROSPECTIVE TAXATION

The Cairn India requested the Government of India to adhere to the international arbitration tribunal's ruling

About:

- **Tribunal under PCA:** In December 2020 a three-member tribunal in the Permanent Court of Arbitration (PCA) at The Hague had ruled unanimously against the retrospective tax levied by India on Cairn in 2015.
- The tribunal also awarded Cairn $1.2 billion in damages.

The background of the case

- In 2006-07, Cairn UK transferred shares of Cairn India Holdings to Cairn India. The Income Tax authorities in India forwarded a tax demand of INR. 24,500 crores on the ground that Cairn UK had made capital gains.
- The company denied any tax was due even if the retrospective amendments to Income Tax Act are applied as the group reorganization had not resulted in any real income accruing to it.
- **In 2012, the Indian government retrospectively amended the tax laws** through the Finance Bill, 2012, and gave itself the power to impose a tax on mergers and acquisitions (M&A) deals. The law was made retrospectively effective since 1962 if the underlying asset was in India.
- In 2015, Cairn argued the **retroactive application** of the tax law is a breach by the Government of India of its obligations under the **UK-India Bilateral Investment Treaty.**
  - Cairn Energy then commenced international arbitration proceedings against the Indian government.

The Ruling of the Tribunal in Cairn vs GoI case:

- **Under the ambit of PCA:** The Issue was not just a tax-dispute but an investment-related dispute, hence, the issue comes under the jurisdiction of the PCA.
- **Not Fair:** The retrospective taxation undertaken by the government of India was in breach of the guarantee of fair and equitable treatment to all investors.
- **UK-India Bilateral Treaty:** The Centre had failed to uphold its obligations under the UK-India Bilateral Investment Treaty and international laws in seeking tax payments from the company for its business reorganisation in the country.
- The Indian government must pay 1.2 billion US dollars (roughly INR 8,000 crore) as damage payment to Cairn.

Retrospective taxation:

- Retrospective taxation allows a country to pass a rule on taxing certain products, items, or services and deals and charge companies from a time behind the date on which the law is passed.
- Apart from India, many countries including the US, the UK, the Netherlands, Canada, Belgium, Australia, and Italy have retrospectively taxed companies, which had taken the benefit of loopholes in the previous law.

The Permanent Court of Arbitration

- This inter-governmental organization was established in 1899 during the First Hague Peace Conference.
- **Aim:** To facilitate arbitration and other forms of dispute resolution between countries.
- **HQ:** in the Peace Palace in The Hague, Netherland.
- **Structure:** The PCA has a three-part organizational structure consisting of an
  - **Administrative Council** that oversees its policies and budgets,
  - A panel of independent potential arbitrators known as the **Members of the Court.**

Drawbacks of Retrospective Taxation:

- **Lose faith of investors:** Retrospective taxation lowers the Investor's trust. This may lead to the flight of foreign capital from the Indian economy which would hurt domestic growth, employment, and standard of
- **Model BIT:** India has unilaterally terminated the Bilateral investment treaties with countries and formulated a new model BIT in 2016 but only a few countries have adopted the new treaty.
- **Hurting the government effort:** Such incidence may hurt the programs of the government of India such as 'Make in India', 'Liberalisation of FDI' etc.

Way Forward:

- **Ease of Doing business:** An investment-friendly business environment would increase economic activity and help raise more revenue over time for the government.
- **Clarification about tax laws:** This is required to plug the loopholes in taxation laws and effective tax administration.
- **Dispute resolution mechanism:** The establishment of an effective dispute resolution mechanism would prevent the disputes from going to international courts, and thus save the time and cost involved.
- **Improve the arbitration ecosystem:** This would create a positive impact on the ease of doing business.

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Feature Article

INCREASING FISCAL DEFICIT

Pandemic pushes India's fiscal deficit to 9.5% of the GDP in FY 2020-21

About:

- The projected fiscal deficit (as per Government Budget for the FY 2020-21), was 3.3% of the GDP for the FY 2021-22. However, the fiscal deficit rose to 9.5% of the GDP in the FY 2020-21. Moreover, the fiscal deficit for FY 2021-22 is estimated to be 6.8% of the GDP.
- The government will try to achieve a fiscal deficit of 4.5 percent of GDP by 2025-26 by increasing buoyancy of tax revenues through increased tax compliance as well as asset monetisation.

Reason for rising fiscal deficit:

- **Low revenue:** Due to the lockdown amid the Covid-19 pandemic, the revenue of the government has decreased.
- **High expenditure:** The government has planned to take an expansionary fiscal stance to revive the economic growth and protect the livelihood of people affected by the pandemic.
- **Failure to achieve disinvestment target:** The government fell short of meeting its Rs 2.1 lakh crore disinvestment target. This forced the government to borrow extra money from the market.

Fiscal Consolidation:

- The Fiscal Responsibility and Budget Management (FRBM) bill was introduced in the parliament for providing legal backing to the fiscal discipline.
- The FRBM Act, 2003 set targets for the Government of India to reduce fiscal deficits, eliminate revenue deficits, improve the management of public funds, and strengthen fiscal prudence.

Major Provisions of the FRBM Act, 2003:

- **Reduction of the fiscal deficit:** The FRBM rule set a target reduction of fiscal deficit to 3% of the GDP by 2008-09. This will be realized with an annual reduction target of 0.3% of GDP per year by the Central government.
- **Elimination of revenue deficit:** Revenue deficit has to be reduced by 0.5% of the GDP per year with complete elimination by 2008-09.
- **Reduction of Public Debt:** The government has to take appropriate measures to reduce the fiscal deficit and revenue deficit to eliminate revenue deficit by 2008-09 and thereafter, a sizable revenue surplus has to be created.
- **Annual targets:** It mandated setting annual targets for the reduction of fiscal deficit and revenue deficit, contingent liabilities, and total liabilities.
- **Prohibited deficit financing by the RBI:** The government shall end its borrowing from the RBI except for temporary advances. The RBI was supposed to not subscribe to the primary issues of the central government securities after 2006.
- **Exceptions:** The revenue deficit and fiscal deficit may exceed the targets specified in the rules only on grounds of national security, calamity and other exceptional grounds to be specified by the Central government.

Amendments to FRBM Act:

- **Amendment in 2012:** The amendment mandated that the Union government needs to lay before the Houses of Parliament three policy documents, namely
  - Macro-Economic Framework Statement
  - Medium Term Fiscal Policy Statement
  - Fiscal Policy Strategy Statement along with the Annual Financial Statement and Demands for Grants.

Targets and Fiscal Indicators as per the FRBM Act:

- **NK Singh Committee (2016) recommended,** to keep fiscal deficit at 3% of the GDP in the years up to March 31, 2020, subsequently reduce the fiscal deficit to 2.8% of the GDP in FY 2020-21 and 2.5% of the GDP by 2023.
- The union government is required to limit its debt to 40% of the GDP by the year 2024-25.

In response to the COVID-19 pandemic:

- In the Budget for FY 2021-22, the Union government has not provided a target for the next three years and amended the FRBM Act to accommodate the higher fiscal deficit.
- The fiscal deficit is targeted at 6.8% of GDP in 2021-22, down from the revised estimate of 9.5% in 2020-21.
- In the Union Budget 2021 speech, the Finance Minister has announced the government's aim to steadily reduce fiscal deficit to 4.5% of GDP by 2025-26.

The FRBM review committee:

The committee was formulated under the chairmanship of Mr. NK Singh and its recommendations are

- It proposed to replace the FRBM Act, 2003 with a Debt Management and Fiscal Responsibility Bill, 2017.
- **Debt to GDP Ratio:**
  - The Committee suggested using debt as the primary target for fiscal policy.
  - Debt to GDP ratio of 60% should be targeted with a 40% limit for the Union and a 20% limit for the states. The

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targeted debt to GDP ratio should be achieved by 2023.
  - To achieve the targeted debt to GDP ratio, it proposed yearly targets to progressively reduce the fiscal and revenue deficits till 2023.
- **Fiscal Council:**
  - The Committee proposed to create an autonomous Fiscal Council with a Chairperson and two members appointed by the centre.
  - **To maintain its independence,** it proposed a non-renewable four-year term for the Chairperson and members. Further, these people should not be employees in the central or state governments at the time of appointment.
  - **Role of the Council:** The role of the Council would include: (i) preparing multi-year fiscal forecasts, (ii) recommending changes to the fiscal strategy, (iii) improving quality of fiscal data, (iv) advising the government if conditions exist to deviate from the fiscal target, and (v) advising the government to take corrective action for non-compliance with the FRBM act.
- **Deviations:**
  - The Committee noted that under the FRBM Act, the government can deviate from the targets in case of a national calamity, national security, or other exceptional circumstances notified by it.
  - These deviations cannot be more than 0.5% of GDP in a year.
- **Debt trajectory for individual states:** The Committee recommended that the 15th Finance Commission should be asked to recommend the debt trajectory for individual states. This should be based on their track record of fiscal prudence and health.
- **Borrowings from the RBI:** The committee also reiterates the need to restrict the government from borrowing from the Reserve Bank of India (RBI) except when: (i) the centre has to meet a temporary shortfall in receipts, (ii) RBI subscribes to government securities to finance any deviations from the specified targets, or (iii) RBI purchases government securities from the secondary market.

Challenges:

- **Multiple Targets:** Mr. Arvind Subramanian, the former chief economic advisor commented that having multiple targets (debt, fiscal deficit, and revenue deficit) with precise limits may make it difficult to achieve them all. He suggested having a single objective, i.e. placing debt on a declining trajectory, and proposed alternate limits to reduce debt and deficits till 2023.
- **Infrastructure development:** India needs large capital expenditure to develop railways, roadways, waterways, and industries to revive and sustain economic growth.
- **Low Tax-to-GDP ratio:** Improved tax collection will help.
- **Regulatory Burden:** Requirement of multiple regulatory clearances, the problem in land acquisition has led to delay in implementation of projects and programs and also led to cost escalation.

Way Forward:

- **Improve tax revenue:** The tax-to-GDP ratio can be improved through rationalization of tax structure, improving tax administration, and simplifying the process of the tax return.
- **Increase non-tax revenue:** Through innovative measures such as commercialization of projects of the ISRO, the government can earn extra money.
- **Reduce the revenue deficit:** Revenue deficit implies that the government does not contain the money required to run its day-to-day activities. Revenue deficits should be brought to zero.

Fiscal Deficit

- The fiscal deficit is the difference between the government's total expenditure and its total receipts (excluding borrowing). A fiscal deficit occurs when this expenditure exceeds the revenue generated.
- There are two sources to finance the fiscal deficit. These are:
  - **Borrowings:** From internal sources such as raising debt from a commercial bank, or external sources like the IMF, foreign governments, etc.
  - **Deficit financing:** This refers to borrowing funds from RBI against government securities. In this case, RBI prints new currency.
- It indicates the total borrowing requirements of the government from all sources. The government meets the fiscal deficit by borrowing.
- **Revenue Deficit:** It refers to the excess of the government's revenue expenditure over revenue receipts.
- Revenue receipts are money earned through day-to-day operational activities. Revenue receipts include tax revenue, fine, etc.
- Revenue Expenditure is that part of government expenditure that does not result in the creation of assets. Payment of salaries, wages, pensions, subsidies, etc. is part of revenue expenditure.
- **Primary Deficit:** Primary deficit equals fiscal deficit minus interest payments. This indicates the gap between the government's expenditure requirements and its receipts, not taking into account the expenditure incurred on interest payments on loans taken during the previous years.

  Primary deficit = Fiscal deficit – Interest payments

Feature Article

BAD BANK

The finance minister proposes, in her budget speech, to set up a Bad Bank to solve the NPA crisis in the Indian banking sector.

About:

- **A bad bank is an Asset Reconstruction Company (ARC)** or an Asset Management Company (AMC) that buys bad loans (Non-Performing Assets) from the commercial banks at a discount and tries to recover the money from the defaulter by providing a systematic solution over a period of time.
- The bad bank is not involved in lending and taking deposits, but helps commercial banks clean up their balance sheets and resolve bad loans.

NPAs in Indian Banking Sector:

- **The Financial Stability Report (FSR) of the RBI** noted that the gross NPAs in the Indian banking sector is expected to shoot up to 13.5% of loans and advances by September 2021, from 7.5% in September 2020.
- **The K V Kamath Committee** established by the RBI noted that corporate sector debt worth INR 15.52 lakh crore has come under stress after Covid-19 hit India, while another INR 22.20 lakh crore was already under stress before the pandemic.

The idea of Bad Bank:

- **US-based Mellon Bank created the first bad bank in 1988,** after which the concept has been implemented in other countries including Sweden, Finland, France, and Germany.
- **The Economic Survey-2017 suggested** the creation of a Public Sector Asset Rehabilitation Agency (PARA).
- **PAMC and NAMC:** The RBI suggested forming two entities to clean up the bad loan problems ailing PSBs, namely, PAMC (Private Asset Management Company) and NAMC (National Assets Management Company).
  - **PAMC:** PAMC would be formed by roping in banks and global funding companies. This would invest in areas where there's short-term economic viability.
  - **NAMC:** NAMC would be formed with government support, which would invest in bad assets with short-term stress but good chances of turnaround and economic benefit.

The benefit of 'Bad Bank':

- **Asset Monetization:** Bad Bank may provide a parallel mechanism with the Insolvency and Bankruptcy Code and help in the generation of money out of stressed assets.
- **Improving the balance sheet of the Banks:** This would free the banks from the problem of NPAs, leading to improved credit creation in the economy paving the way for recovered economic growth.
- **Coordination among creditors:** Often a debtor had taken a loan from multiple banks or financial institutions. A centralized agency like Bad Bank would solve the problem of lack of coordination among banks for the resolution of the NPAs.
- **Speedy settlement process:** Aggregating stressed assets into a single firm could make it easier for foreign funds to build up controlling positions in the debt of companies. At present, Investors need to negotiate individually with each lender, resulting in debt resolutions that take over a year.
- **Post-Covid recovery:** Covid-19 pandemic had deteriorated the earnings of businesses and individuals, thereby imposing further strain on their ability to repay loans despite the RBI's loan moratorium.

Challenges:

- **Availability of Buyer:** There is an apprehension of low chances of private participation unless investors are allowed a major say in the governance of the new entity.
- **Encourage moral Hazard:** Economists point out that if states take over non-performing loans, this encourages banks to take undue risks, leading to a moral hazard.
- **No addressing Long-term solution:** Bad Bank will not address the long-term problems such as the requirement of governance reform in Public sector banks.
- **Lack of price discovery:** The price at which bad assets are transferred from commercial banks to the bad bank will not be market-determined and this will affect real-time price discovery.

Way Forward:

- **Governance reform:** The establishment of a Bad Bank must be preceded by the implementation of governance reforms in the banking sector as envisaged under the Indra Dhanush plan launched in 2015.
- **Stricter NPA Recovery:** The government needs to amend the laws and give more powers to banks to recover NPAs.
  - The RBI has asked for nine additional powers under the Banking Regulation Act with regards to PSBs including the ability to appoint and remove CMDs, the power to supersede the Board of Directors, etc.
- **Transparency and accountability:** There is an urgent need to tighten banks' internal and external audit systems to prohibit banking fraud.

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Feature Article

CHINESE INVESTMENT IN SRI LANKA

Sri Lanka has awarded a contract to set up hybrid wind and solar energy projects on three Sri Lankan islands to a Chinese company.

About:

- **Three Islands:** The projects will be established in three islands, namely Delft (Neduntheevu), Nainativu, and Analativu islands which are situated in the Palk strait off the Jaffna peninsula.
- **The distance between** Delft and Rameshwaram (India) is only about 45 km.
- The project will be funded by the Asian Development Bank or ADB.
- **Katchatheev island is situated between Rameshwaram** (Tamil Nadu, India) and **Neduntheevu** (Delft) island. The uninhabited island has been traditionally used by both Sri Lankan Tamil and Indian fishermen.
  - In 1974, the government of India ceded Katchatheevu to Sri Lanka under the "Indo-Sri Lankan Maritime agreement" aimed at resolving the maritime boundaries in the Palk Strait.
- **In response to India's perceived displeasure** on the issue, a Sri Lankan foreign official commented that the Sri Lankan government cannot be blamed for this decision, because the project is backed by the Asian Development Bank, which has its "own procurement guidelines that should be followed by the borrower".

India's Concerns:

- **Chinese presence near India's border:** Chinese presence in the vicinity is concerning when India already has many unresolved issues with China.
- **Palk strait area:** The maritime area is a contentious place between Indian and Sri Lankan fishermen. Both sides claim the area based on the traditional right of fishing and transportation. This project may provide China with the scope to interfere in the bilateral issues between India and Srilanka.
- **India's influence in the Indian Ocean region:** India is worried about Chinese intention in the region which is referred to as 'Strings of pearl policy'. This would harm India's ambition to appear as a 'Net Security Provider' in the Indian Ocean region.
- **Impact of Sino-China relation:** Recently, Sri Lanka was forced to hand over control of the Hambantota port project to China for 99 years for getting debt relief.
- **Recent developments:** The government of Sri Lanka canceled the tri-partite contract with India and Japan for building the Eastern Container Terminal (ECT) in the southern part of Colombo port.

Sino-Sri Lanka relation:

- **Geopolitical angle:**
  - Sri Lanka was one of 53 countries that backed the Hong Kong national security law at the United Nations.
  - Sri Lanka also support China's claim on the 'South China sea dispute'.
  - UN ambassadors from 50 countries, including Sri Lanka, have signed a joint letter to the UNHRC defending China's treatment of Uyghurs and other Muslim minority groups in the Xinjiang region.
- **Military aid:** China supplies a range of modern armaments to the Sri Lanka Armed Forces. China also aids in the training of Sri Lankan military personnel
- **Infrastructure development:** Sri Lanka is China's important country for the maritime component of China's Belt and Road initiative. China is involved in developing of Port of Hambantota, the Hambantota International Airport, the Norocholai Power Station, and the ambitious Port City Colombo project.
- **Development aid:** China has emerged as the leading source of Official Development Assistance (ODA) and Foreign Direct Investment (FDI) in Sri Lanka. The total investment of China in Sri Lanka since 2005 amounts to $16 billion US dollars by 2016. Most of the ODA in loans and grants have been provided in sectors like energy, infrastructure, and services.

Way Forward:

- **Development engagement:** India needs to ramp up developmental projects in Srilanka guided by the idea of 'Neighbourhood First' policy and Gujaral doctrine.
- **Resolve bilateral disputes:** The issues include fishermen's rights in the sea, safeguarding the interest of Tamils in Srilanka, and ensuring rehabilitation of civil war victims.
- **Asia-Africa growth corridor:** To counter China's ambitious Belt and Road initiative, India needs to provide alternate options to developing nations. India and Japan led 'Asia-Africa growth corridor' has the potential to counter China's infrastructure development in low-income nations.
- **Quad Grouping:** Quad is an informal group of four like-minded countries namely, India, Japan, Australia, and the USA. The quad may emerge as an important actor to contain China and its aggressive stance in the South China Sea and Indian Ocean region.

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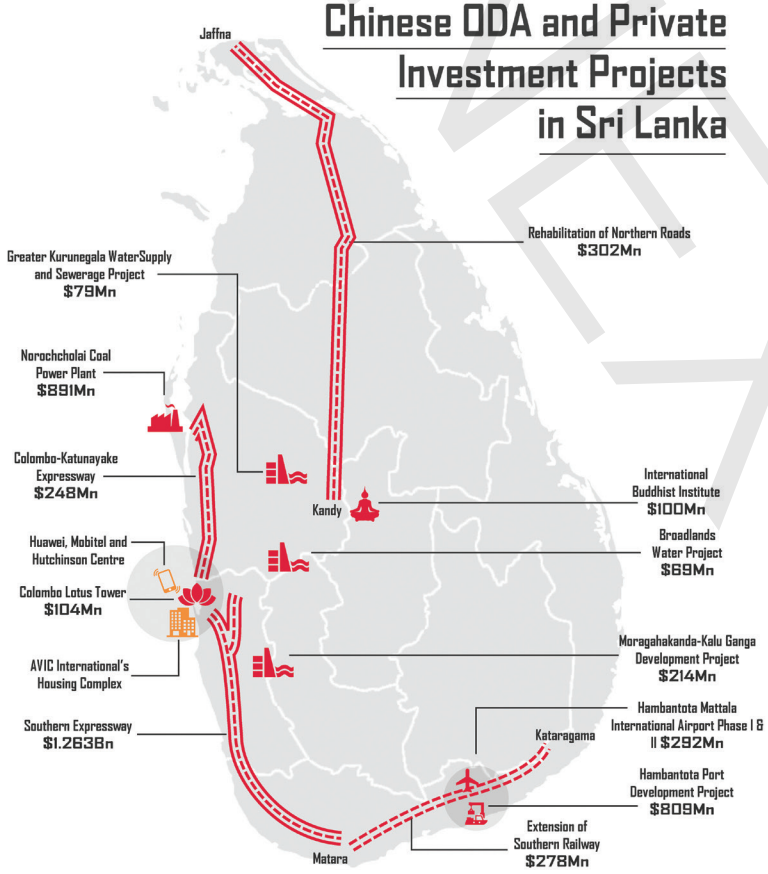
CHINESE INVESTMENTS IN SRI LANKA (2005-15)

Chinese ODA and Private Investment Projects in Sri Lanka



Investment in various Sectors

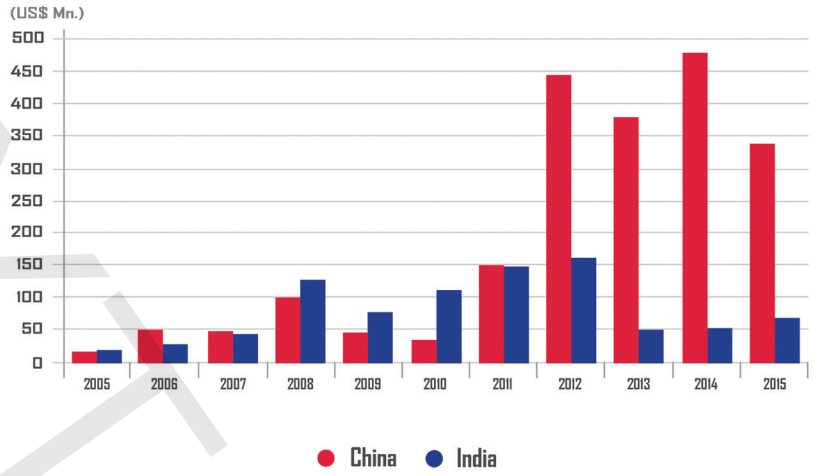
ODA

Grant | Roadways | Energy | Airport | Railways | Water Supply projects | Infrastructure | Port Development

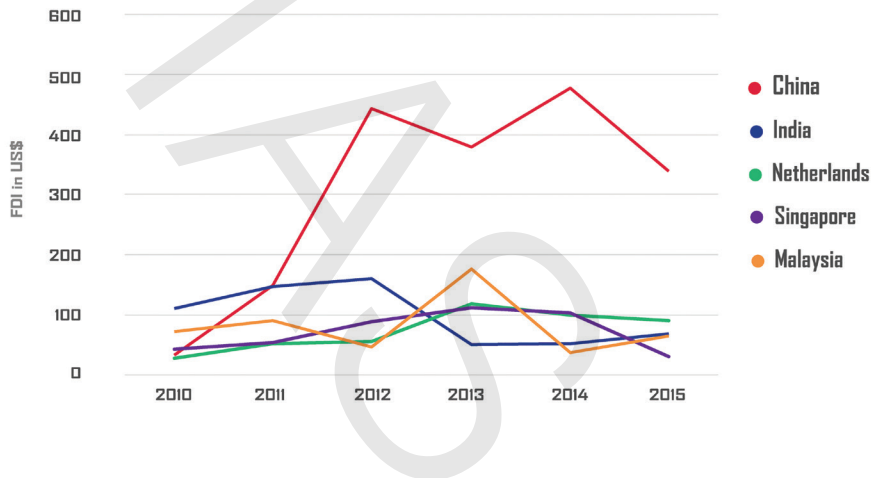
Private Investments

Infrastructure | ICT- Information Communications Technology | Shipping | Apparel Industry

FDI from China and India



Top Five FDI Sources (2010 -15)



Feature Article

COUP D'ETAT IN MYANMAR

India's option to engage with Myanmar in the aftermath of Coup d'etat by Myanmar Army.

About:

- **General Election 2015:** The National League for Democracy led by Aung San Suu Kyi won the election with an overwhelming majority.
- **November 2020 General election:** National League for Democracy led by Aung San Suu Kyi has experienced a landslide victory over the military-backed Union Solidarity and Development Party (USDP).
- **Coup d'état:** On 1st February, The Myanmar army seized power after overthrowing the elected government led by de facto leader Aung San Suu Kyi in a coup d'état. The Army captured power, arrested leaders, and declared a state of emergency for one year.
- **Allegation of electoral fraud:** The military has alleged that the general elections held in November 2020 were full of "irregularities". It has questioned the accuracy of around 9 million votes cast in the election

What India should do?

- **India's military diplomacy:**
  - Indian establishment enjoys cordial relation with Myanmar army and particularly with the present de-facto ruler of Myanmar, General Min Aung Hlaing.
  - Aung San Suu Kyi led the National League for democracy focused on developing closer ties with China.
  - Myanmar army has criticized China's support to Myanmar's ethnic armed groups.
- **India's pragmatic engagement:** India has developed trust with both the Tatmadaw, Myanmar's military administration and the National League for Democracy as the Ministry of External Affairs had kept India's defense training, supply, and security ties with the military separate from India's political support for the popular will in Myanmar.
- **The China factor:** In previous instances, Myanmar grew closer tie with China in response to the economic sanctions imposed by the USA and European countries. India needs to keep an eye on China's engagement in our neighborhood.
- **Indo-Myanmar strategic cooperation:** India has developed strategic ties with Naypyidaw. Any knee-jerk reaction without analyzing the ground reality would be counter-productive. The strategic dimension includes close security cooperation, defense engagement, and regional integration. It may also be observed through the following developments,
  - The Government of India provided 1.5 million doses of Covid Vaccine to Myanmar.
  - In contrast to much of the international community, Prime Minister Modi declined to criticize Suu Kyi's handling of the 2016–17 Northern Rakhine State clashes or Myanmar's government's treatment of its Rohingya people.
  - India gifted INS Sindhubir to Myanmar Navy, the refurbished Kilo-class submarine will be the Myanmar army's first submarine.
- **Indo-Myanmar Development cooperation:** India has been engaged in building infrastructure and undertaking capacity development programs in Myanmar. Kaladan multi-modal transit transport project, Indo-Myanmar-Thailand trilateral highway are important for India's 'Act East policy'.
- **India as a non-permanent member of the UNSC:** India's current term in the UNSC will provide the opportunity to play an active role in the crisis. India's response should be aligned with our long-term interest in nurturing ties with the people and economy of Myanmar.

India-Myanmar History of Diplomatic Relation

- **India established diplomatic relations** after Myanmar's independence from Great Britain in 1948. In the initial years, Indo-Myanmar relations were cordial due to cultural links, flourishing commerce, common interests in regional affairs, and the presence of a significant Indian community in Myanmar. India provided considerable support when Myanmar struggled with regional insurgencies.
- In 1962, the Military of Myanmar overthrew the democratically elected government. This led to a strain on ties as India condemned the suppression of democracy and Myanmar ordered the expulsion of the Burmese Indian community. During this time, Only China maintained close links with Myanmar while India supported the pro-democracy movement.
- In 1987, Indian Prime Minister Rajiv Gandhi visited Myanmar which was regarded as a breakthrough in the thawed relation. However, relation again soured after the military junta's reaction towards pro-democracy movements in 1988, which resulted in an influx of Burmese refugees into India.
- Since 1993 the governments of the Government of India adopted 'Look East policy' and changed course and began to establish warmer relations between the two nations, as part of a wider foreign policy of increasing India's participation and influence in Southeast Asia.

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- **Leverage the Regional Grouping:** India should pro-actively engage regional groupings such as the ASEAN, the BIMSTEC, or SAARC in diffusing of tension. This would project India as a natural leader in the region.
- **Quiet Diplomacy:** India should stand clearly with the people. But it should preserve its trust and rely on quiet diplomacy. It could curb economic ties, if any, with the Tatmadaw while building on investments in connectivity infrastructure and capacity-building, with a focus on the neglected agro-economy on which most people in Myanmar depend. It could also take a lead in working
- **Support to democratic values:** New Delhi should advocate for the restoration of a popular government. For this, New Delhi should engage with ASEAN and Japan in bringing civilian rule back to Myanmar.
- **Support to Rohingya:** Rohingyas have been described as 'the most persecuted community on earth today'. The declaration of emergency would increase threat and vulnerability. India need engage countries, international organization, and other stakeholders to arrive at a peaceful conclusion to Rohingya problem.

Myanmar's significance for India:

- **Border security:** Being highly porous, poorly guarded and located along a remote, underdeveloped, insurgency-prone region and proximate to one of the world's largest five opium-producing areas, the India-Myanmar border is vulnerable to the activities of insurgents, drugs, and arms traffickers as well as criminals.
- **Tackling insurgency:** Several outlawed groups such as ULFA (Unified Liberation Front of Assam) or NSCN (National Socialist Council of Nagalim) had established cells in Myanmar and conducted anti-India operations. Indian and Myanmar forces jointly carried out 'Operation Sunrise' in their respective territories to destroy several insurgent camps.
- **Development of North-East India:** Myanmar provides alternate market, connectivity, and business opportunity in North-east India which suffers from a lack of development and sound infrastructure.
- **Controlling Drug Trafficking:** Proximity to the 'Golden Triangle' together with a porous and poorly guarded border provides the enabling environment for traffickers to smuggle heroin and psychotropic substances into the country through the India-Myanmar border.
- **Myanmar's regional importance:** Myanmar is an Important interlocutor in regional grouping such as the ASEAN (the Association of Southeast Asian Nations), the BIMSTEC (The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), Indian Ocean Rim Association among others.
- **Contain Chinese influence in the backyard:** China enjoys greater leverage over Myanmar through its strategic investments, influence over ethnic armed groups, and veto power in the UNSC, it lacks the trust India has acquired.
- **Rohingya issue:** Rohingya crisis is a regional problem that requires coordination among regional countries such as Myanmar and its neighbors such as India, Bangladesh, China, and others.
- **Economic Cooperation:**
  - The bilateral trade reached 1.5 billion US dollar in 2017.
  - The Indian government has worked to extend air, land, and sea routes to strengthen trade links with Myanmar and establish a gas pipeline.

International response to the coup:

- The official response of the Ministry of External Affairs of India mentions that commented that New Delhi had noted the developments in Myanmar with deep concern, India has always been steadfast in its support to the process of democratic transition in Myanmar. MEA further commented India believes that the rule of law and the democratic process must be upheld. We are monitoring the situation closely,
- The United States administration imposed sanctions on Myanmar's acting president and several other military officers
- China noted the coup and said it hoped both sides would uphold stability and resolve their differences under the Myanmar Constitution.
- The National League for Democracy stated its Facebook page, urging the people "not to accept" the coup by the military.
- Both ASEAN and the UN Security Council have expressed "deep concern" at the declaration of emergency and called for the release of all those detained, and respect for the popular will.

Way Forward:

- **India should avoid a knee-jerk reaction**. New Delhi should avoid being seen as inclined towards either the Military establishment of the National League for Democracy.
- **New Delhi should refrain from criticizing the military**. Cooperation between the armed forces of both the countries is critical for containing armed insurgency in North-East Indian states, particularly in Assam, Nagaland, and Mizoram.
- Our support should be based on the values of supporting democracy, non-interference in internal affairs, and the development of regional peace.

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Feature Article

CENTRE FOR WETLAND CONSERVATION AND MANAGEMENT

The ministry of Environment, Forest and Climate Change announced the establishment of a Centre for Wetland Conservation and Management, as a part of the National Centre for Sustainable Coastal Management, Chennai.

About:

- Centre for Wetland Conservation and Management (CWCM) would address specific research needs and knowledge gaps and It will aid in the application of integrated approaches for conservation, management and wise use of the wetlands.
- Its functions would include the following,
  - Building partnership and networks with relevant national and international agencies.
  - Serve as a knowledge hub and enable exchange between State/UT Wetland Authorities, wetland users, managers, researchers, policy-makers and practitioners.
  - Assist the national and State/UT Governments in the design and implementation of policy and regulatory frameworks, management planning, monitoring and targeted research for wetland conservation.

Wetland:

- Wetlands are transitional ecosystem between terrestrial and aquatic ecosystem where the general water table is at or near to the surface, or the land is covered under shallow water.
- The wetlands mainly include marshes, swamps, flood plains, peatlands, bogs, shallow ponds, littoral zones of larger water bodies and tidal marshes.

Wetland in India:

- India has nearly 4.6% of its land as wetlands, covering an area of 15.26 million hectares.
- There are 42 wetlands in India designated as Wetlands of International Importance (Ramsar Sites), India has added Tso Kar Wetland Complex in Ladakh as its 42nd Ramsar site.

Governance:

- Wetlands are regulated under the Wetlands (Conservation and Management) Rules, 2017. Significant provisions are
- **Decentralisation of regulation:** The rules decentralised wetlands management by giving states powers to identify and notify wetlands within their jurisdictions. The state government would also regulate prohibited activities.
- **'Wise Use' Principle:** It also indirectly widens the ambit of permitted activities by inserting the 'wise use' principle, giving powers to state-level wetland authorities to decide what can be allowed in the public interest.
- **Limiting the role of the Centre:** The Centre's role has been restricted to
  - Monitoring of the implementation of rules by states/UTs,
  - Recommending trans-boundary wetlands for notification
  - Reviewing integrated management of selected wetlands under the Ramsar Convention.

Importance of Wetlands:

- **Prevents eutrophication:** The wetlands act as buffers for terrestrial run-off and prevents eutrophication of the inland and coastal waters.
- **Biodiversity:** Wetlands provide habitat for a wide range of flora and fauna.
- **Supports both aerobic and anaerobic lifeform:** The wetlands create an oxic-anoxic condition which facilitates simultaneous activity of both aerobic and anaerobic lifeforms.
- **Disaster Risk Reduction:** Wetlands mitigate flood impact, protect coastlines and build community resilience to disasters.
- **Livelihood activity:** Wetland supports income-generating activities such as fishing, tourism, supplying food etc.
- **Carbon sequestration:** Wetlands help in reducing the intensity of global warming and climate change

The threat to Wetlands:

- **Anthropogenic pressure:**
  - **Urbanization:** Requirement of land is satisfied through the filling of natural wetlands
  - **Sewage:** Industrial effluent, domestic garbage mixes in the wetland, polluting the water and endangering the lives dependent on the wetland.
  - **Agricultural run-off:** Pesticides, fertilizers mixes with water of the wetland and leads to eutrophication.
- **Natural threat**
  - **Aquatic Weed:** aquatic weeds such as species of Salvinia, Pits, Eichhornia, Hydrilla, etc multiply very quickly and cover the waterbodies. They pose a major threat to the inland wetland by reducing the rate of photosynthesis and aquatic productivity.

Do You Know?

- **World Wetland Day:** World Wetlands Day is celebrated every year on the 2nd of February, the day of signing of Ramsar convention 50 years before in 1971.
- **National Centre for Sustainable Coastal Management:**
  - It is a research institution under the administrative control of the Ministry of Environment, Forest and Climate change.
  - **Headquarter:** Chennai

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Feature Article

INDIA HAS THE POTENTIAL TO BECOME A DEFENSE EXPORTER

Ukraine has signed four agreements worth $70 million to procure some military hardware from India.

About:

- Ukraine has signed four agreements worth $70 million which includes the sale of new weapons as well as maintenance and upgrades of existing ones in service with the Indian armed forces. This also includes a pitch to India of its AN-178 medium transport aircraft.
- India has the potential to become a defense exporter rather than an importer, provided we promote indigenization in the defense sector.

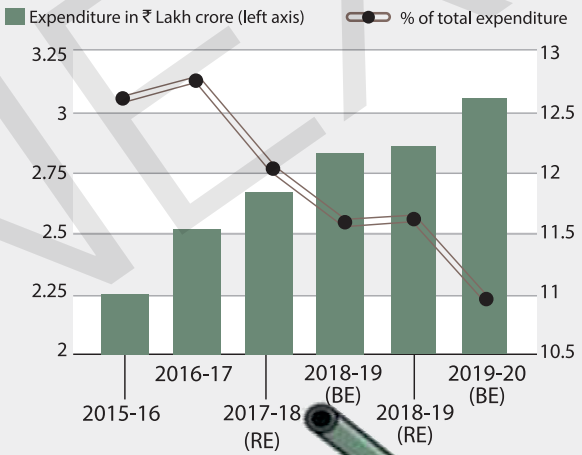
Benefits of indigenization in defense sector:

- **Reducing India's Fiscal Deficit:** Currently, India's defense sector imports stand at 70%. This makes India the 2nd largest **arms importer in the world, only** next to Saudi Arabia.
  - **According to the Stockholm International Peace Research Institute (SIPRI),** in 2019, India became the third-largest defense spender in the world. So, indigenization of the defense sector is necessary to reduce the Fiscal Deficit.
- **National security at risk:** India shares **porous borders** with **hostile neighbors.** Currently, imported equipment in India are creating multiple challenges related to their Maintenance, Repair & Overhaul (MRO) due to non-availability of spares and assemblies.
  - These equipments without proper MRO can put India under major risks mainly during the war like situation.
- **Generation of employment:** Defense manufacturing is one of the very few sectors that will lead to multiplicity of employment benefits.
  - **As per the government estimates, just 20-25% import reduction** will directly create 100,000 to 120,000 additional highly skilled jobs in India.
- **Boosting Indian exports and generating forex reserve.** The SIPRI data mentions India as the 23rd largest country in terms of defense exports.

MUTED SPENDING

Defence allocation in % terms in FY20(BE)** has reduced in comparison to FY19(RE)^. In dia had spent 2.4% of its GDP on defence, which is comparable with other developing nations

DIP IN SHARE
Close to 11% of India's total expenditure in FY20(BE) is allocated for the defence sector. The military budget has fallen by 0.6 percentage points in FY20(BE) compared to FY19(RE)



**Budget Estimates | ^Revised Estimates
SIPRI: Stockholm International Peace Research Institute
Data sourced from Budget documents and SIPRI

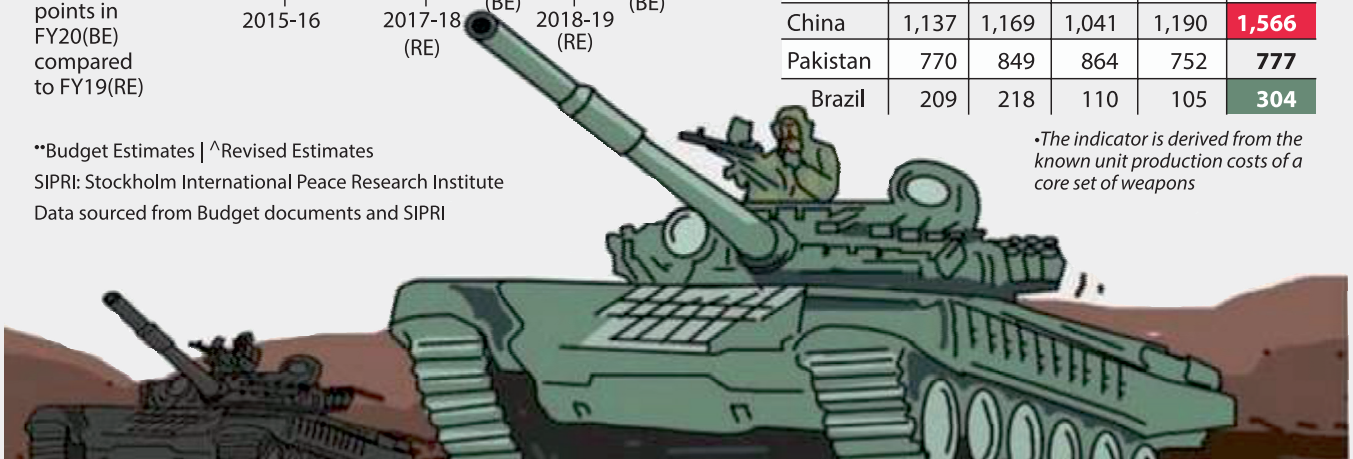
AS A SHARE OF GDP
India's military expenditure accounted for 2.4% of its GDP in 2018..Over the last five years, the share has remained constant

Country	2014	2015	2016	2017	2018
India	2.5	2.4	2.5	2.5	**2.4**
USA	3.5	3.3	3.2	3.1	**3.2**
China	1.9	1.9	1.9	1.9	**1.9**
Pakistan	3.5	3.6	3.6	3.8	**4**
Brazil	1.3	1.4	1.4	1.4	**1.5**

BUYING SPREE
India was the leading arms importer between 2014 and 2018. The table shows a trend indicator value. (in mn) used by SIPRI as a proxy for arms imports by a nation

Country	2014	2015	2016	2017	2018
India	3,334	3,065	3,021	2,917	**1,539**
USA	548	516	446	524	**613**
China	1,137	1,169	1,041	1,190	**1,566**
Pakistan	770	849	864	752	**777**
Brazil	209	218	110	105	**304**

•The indicator is derived from the known unit production costs of a core set of weapons



- This shows under-performance considering the fact that, India spent $71.1 billion in the defense sector in 2019 alone.
- India can export indigenously produced defense technology and equipment to the neighboring nations.
- Like space and nuclear research, R&D in defense sector will increase the focus on both civil and military economy.

- **Indigenous equipment will** increase the trust and confidence of the Indian defense forces. It will also strengthen India's image in the global arena.
- **Promote R&D:** This could lead to innovation and R&D in the defense sector.

Government initiatives to boost indigenization in defense sector:

- India introduced the **Defense Procurement Policy** to focus on self-reliance. The policy allowed the (DAC) **Defense Acquisition Council** to **"fast-track"** ways to acquire weapons. The policy aims **2025 to be the year to become self-reliant in 13 weapons platforms.** These include missiles, warships, tanks, aircraft, and artillery. These comprise the bulk of Indian imports.
- The establishment of **E-Biz Portal.** It is an online portal to process applications for Industrial Licenses (IL). The Government also set up **Innovations for Defense Excellence (iDEX) framework.** It aims to create an ecosystem to foster innovation and technology development in Defense and Aerospace.
- **Removal of annual capacity restriction** criteria for defense industries. This is to facilitate more number of startups in the defense sector.
- The government also approved the **Strategic Partnership Policy.** This is to promote Joint Ventures (JV) between global defense majors and the indigenous private sector. Under this, the government will designate certain private players a status of Strategic Partner (SP). That SP will have long term relationships with global defense majors to learn the technology and also to build the capacity at the local level.
- **Change in FDI policy:** The government earlier allowed 49% of FDI under the automatic route. But in 2020 the government increased this to 74%.

Challenges in indigenization of defense sector:

- **Private sector participation is very low.** Currently, India depends on DRDO and defense PSUs for the majority of its needs. There is an issue of **land acquisition** in India. This, coupled with non-availability of Permanent arbitration committee to settle disputes in India leads to lower private participation.
- **Manufacturing and procurement-related delay.** There are bureaucratic and political hurdles in India. Indian defense suppliers also take more time to complete the projects. There is also a problem of delay in the delivery of the projects. This **hurts** India's image as a **trusted supplier.**
- **Conflict between the manufacturers & defense forces.** Defense forces being on the ground of the battlefield, know that the border areas demand some specific design and characteristics of the equipment. But there is a conflict between the manufacturers and defense forces in India regarding the design, capacity etc. of the defense equipment. All this leads to inefficient coordination between the military, academy and industry.
- Most of the Indian **defense budget goes towards salaries, retirement benefits, perks and benefits, MRO of equipment etc.** This limits the government capacity to focus on long-term budgeting towards the defense sector.

Suggestions to improve indigenization:

- The government can **implement the Shaketkar committee recommendations** on the **closure of Army Postal Establishments and Military Farms in peace locations** swiftly. Apart from that government can also consider the Chief of Defense Staff opinion. He mentioned increasing the retirement age to improve government spending on other relevant activities.
- **Boosting private sector participation is the need of the hour.** This can be achieved by creating a **permanent arbitration cell**, ensuring level playing field for private companies like that of PSUs.
- The government can provide an autonomous status to DRDO. It will improve the number of sub-contracts to the private sector and also instill the confidence to private sectors.
- The government have to improve the in-house design capacity like that of Naval Design Bureau. This will reduce the conflict with manufacturers in design and capacity. **Shaketkar committee** recommended transformation of 'The Military Intelligence School' at Pune into **'tri-service intelligence training establishment'.**

Way Forward:

- According to SIPRI, India's military expenditure in 2019 was 2.4% of its GDP. It was higher than the combined expenditure on health (1.5%GDP) and research (0.7% of GDP). The government needs to improve the indigenization in defense sector at the war pace as it has many benefits such as reducing Fiscal Deficit, improvement in manufacturing etc.
- For Make in India in defense, FDI will be needed for heavy capital and technology requirements, to build global supply chains involving multiple vendors in India, to rapidly implement projects to avoid obsolescence.
- To become a major defense manufacturer, India needs to reexamine its structure of governing defense production, as the Chinese did in 2000.

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Feature Article

USE OF TECHNOLOGY IN LAW ENFORCEMENT

The adoption of modern technology will act as a force multiplier for the Indian Law Enforcement Agencies which already faces the tough challenge of low manpower.

About:

- There is an urgent need for law enforcement agencies (LEAs) to adopt technology in their operations as it can act as a force multiplier.
- This is especially true in India where the police to population ratio is less than 150 per 100,000, whereas the United Nations recommends 222 police officials per 100,000 residents.
- But there are ways in which LEAs can use technology to increase their efficiency and effectiveness.

Use of Digital Technology in Policing:

- Most citizens in India dread the idea of having to go to a police station. Technology can help make this interaction more pleasant.
- By providing digital access to the police, citizens can avail services from the comfort of their home.
- The digital portals provide an easy and transparent mechanism to the citizens to register their complaints, provide feedback and track their complaint status.
- Technology can also be used to provide senior police official's dashboard views for their areas of jurisdiction, identify trends, patterns, outliers and take corrective action.
- Social media can be used by LEAs to reach out directly to citizens — providing information on traffic jams, how to protect against cybercrime, dispelling rumors, countering fake news.
- The social media interaction can be both "push" — alerts are sent to citizens — or "pull" — citizens access the social media page/handle to get the desired information.

Use of Technology in Crime Detection and Prevention:

- Technology can effectively help get a digital footprint of the criminals. **Mobile forensics** can be used to retrieve critical information such as contacts, photos, SMS, video, email, web browsing history, location information and social networking messages.
- **Call Detail Records (CDR)** contain information about calls made and received, cell tower location, International Mobile Equipment Identity — a unique identifier for each mobile phone, and International Mobile Subscriber Identity — a unique identifier for each SIM.
  - Due to the high usage of mobile phones, it is difficult to analyze these records manually. CDR analysis tools can be used to identify call patterns, most frequently called numbers, geo-location, and help in tracking missing persons, lost mobiles, movement, and establish relationships between criminal associates.
- **Artificial Intelligence (AI)** can be used to match fingerprints, facial images, analyses CCTV footage and recognize vehicle number plates. To detect false number plates, AI can also be used to recognize the make and model of the car and match it with the vehicle registered with that number plate.

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- **Big Data** can be used to integrate data from multiple sources such as social media tools, financial institutions, travel records, hotel stays, CDRs and criminal records. This can help create a 360-degree view of the criminal and draw linkages between criminal associates.
- **Smartphone apps** linked to centralized databases can provide the investigating officer real-time access to information on missing vehicles, missing people, dead/unidentified bodies and criminal records, thereby significantly reducing the time taken to investigate a crime.
- The best thing for any LEA is to be able to prevent a crime before it takes place because of big data to identify crime patterns and hot spots.
- AI can be used to draw correlations between the type of crime, time, and location. Analyzing crime patterns in Punjab showed that snatching incidents peaked around 8 pm in rural districts whereas the peak occurred around 10 pm for urban areas.
- Information of streets/roads where most of the snatchings occur can be studied by plotting the crime locations on maps.
- The findings can then be used to deploy beat constables more effectively thereby reducing/preventing crime.
- Given the high number of postings and transfers in the police, **the MIS reports and dashboards** can help the newly transferred officer to get up to speed quickly.
- **Sentiment analysis of social media** chatter can be used to identify potential riots (including location and time) as well as track the source of rumors designed to create communal disharmony.

Use of Technology to ensure better efficiency in Law Enforcement Agencies:

- While most police departments in India have an operational human resources management system in place, efforts need to be put in to mine the data more effectively.
- Analysis of educational qualifications, age, gender, religion, caste, training, posting, rank, and supervisor-to-employee ratio can be used to identify gaps in the organization.
- These gaps can be addressed via hiring, training, postings thereby ensuring a more "balanced" and effective organization.
- Similarly, key performance indicators such as the time taken to file a charge-sheet, types of crimes solved, time taken to address complaints, citizen feedback scores can be used to determine an officer's performance in a more objective manner.
- Training-Open Source Learning Management Systems, low-cost bandwidth and a digitally aware workforce mean that it is now possible to provide online training in a cost-effective manner on an unprecedented scale.

Use of Technology for better integration between various Agencies and Justice delivery systems:

- The five pillars of the criminal justice system are police, courts, prosecution, jails and forensics.
- While efforts have been made to integrate data from these five pillars at the central level, a lot of work needs to be done to integrate these systems at the state level.
- Countless man-years are lost in taking physical files from one place to another. Real-time integration between the information technology systems of these pillars will help in reducing duplicate data entry and errors.

Challenges in the use of technology in Law Enforcement:

- **Lack of integration of systems** between districts and states.
- **Lack of the use of big data technology**. We do not have any national database of criminals or gangs against which suspects can be identified.
- **Law enforcement agencies have failed to discern any trends** in national crime registration across geographic locations which could have been used to devise appropriate crime prevention strategies.
- **Huge Hierarchies:** In the case of police there is huge rank hierarchies which inhibit free and frank communication. So, technologies were implemented without adequate feedback.
- One of the fields which has been left largely untouched is crime analytics. Crime analytics uses algorithms to determine potential threats, discern patterns and visualizes crime distribution which enables police officers to determine areas high in crime.

The Way Forward:

- Use of technology in crime tracking and law enforcement is one area that needs urgent attention and must be addressed. Some of the western countries have implemented robust integrated systems.
- The Crimes and Criminal Tracking and Networking System (CCTNS) was launched in 2009 which intends to digitally process crime registration, investigation, prosecution, and eventually link up with prisons and courts in all the 732 districts of India.
- Government has also implemented an Emergency Response Support System (ERSS) across India which will integrate responses to distress calls relating to medical, fire and police emergencies.
- The pattern of crime is changing with the influx of new technologies and the integration of technologies allows law enforcement to consult multiple databases to improve the quality of their investigations.

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Feature Article

UNLAWFUL ACTIVITIES (PREVENTION) ACT (UAPA)

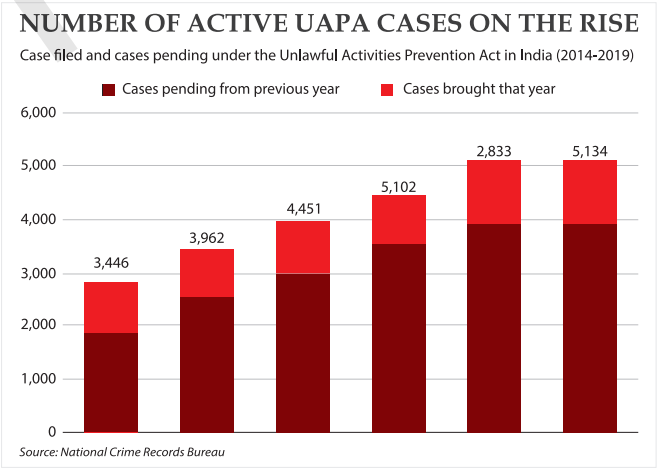
Only 2.2 % of cases registered under the Unlawful Activities (Prevention) Act between the years 2016-2019 ended in convictions by court.

About:

- There has been a rise in the use of UAPA over the past few years. Many activists, journalists and students have been booked under the Unlawful Activities (Prevention) Act (UAPA) in different cases across the country.
- As per the 2019 Crime in India Report compiled by the National Crime Records Bureau (NCRB), the total number of persons arrested under the Act in 2019 is 1,948.
- Further, the total number of the persons arrested and the persons convicted in the years from 2016 to 2019 under the UAPA in the country are 5,922 and 132 respectively.

About Unlawful Activities Prevention (UAPA) Act:

- It was first promulgated in 1967 to target secessionist organisations and considered to be a predecessor of laws such as the (now repealed) Terrorist and Disruptive Activities (Prevention) Act (TADA) and Prevention of Terrorism Act (POTA).
- It aims at effective prevention of unlawful activities associations in India.
  - **Unlawful activity** refers to any action taken by an individual or association intended to disrupt the territorial integrity and sovereignty of India.
  - The Act assigns absolute power to the central government, by way of which if the Centre deems an activity as unlawful then it may, by way of an Official Gazette, declare it so.
- **Punishment:** It has death penalty and life imprisonment as highest punishments.
- **Both Indian and foreign nationals** can be charged. It will be applicable to the offenders in the same manner, even if crime is committed on a foreign land, outside India.
- **Charge sheet:** The investigating agency can file a charge sheet in maximum 180 days after the arrests and the duration can be extended further after intimating the court.
- **The 2004 amendment, added "terrorist act" to the list** of offences to ban organisations for terrorist activities, under which 34 outfits were banned. Till 2004, "unlawful" activities referred to actions related to secession and cession of territory.
- **2019 Amendment:** It empowers to designate individuals as terrorists on certain grounds provided in the Act, only organisations could be designated earlier.
- The Act empowers the Director General of National Investigation Agency (NIA) to grant approval of seizure or attachment of property when the case is investigated by the said agency.
- The Act empowers the officers of the NIA, of the rank of Inspector or above, to investigate cases of terrorism in addition to those conducted by the DSP or ACP or above rank officer in the state.
- Personal/financial information of an individual designated as terrorist can be shared with various Western agencies.
- It allows for seizure of properties that may be connected with terrorism.
- It defines terrorist acts to include acts committed within the scope of any of the nine treaties listed in a schedule to the Act. Some of the treaties include
  - Convention for the Suppression of Terrorist Bombings (1997), and
  - Convention against Taking of Hostages (1979)
  - Convention for Suppression of Acts of Nuclear Terrorism (2005).
- UAPA cases are tried by special courts.



What makes the UAPA more stringent than other laws?

- It is rare for an accused to get bail easily in a case under UAPA.
- The court can refuse bail if in its opinion the case is "prima facie" true.
- An accused cannot seek anticipatory bail, and the period of investigation can be extended to 180 days from 90 days on the public prosecutor's request — which means the accused has virtually no chance of getting bail by default.

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- In UAPA cases, the police custody can also be extended to 30 days as against the 15 days allowed in ordinary criminal cases.

Issues surrounding UAPA act:

- **Curbs individual' Fundamental Right:** It is a draconian law which curtails fundamental rights of an individual in the name of tackling terror by making very tough for accused to get bail.
- **Ambiguous Definitions:** Due to broad and vague definition of terror acts, it can be misused to prosecute even constitutionally protected activity.
- **Restricts the dissenting voices:** Criticism of the state can be termed an act "likely to threaten" India's sovereignty.
- **Unchecked power to the government:** Persons barely linked to terrorist acts or organisations can still be brought within the UAPA's ambit:
  - by alleging that they work in nebulously defined "terrorist gangs" or "front organisations"
  - by charging them under expansively worded offences such as "supporting" a banned organisation and holding property that could be used by it
- Also, the state does not even have to formally accuse individuals of being terrorists to
  - attach their assets,
  - prevent them from entering the country and
  - prohibit funds and services being made available to them

National Investigation Agency (NIA)

- The National Investigation Agency (NIA) was constituted under the National Investigation Agency (NIA) Act, 2008.
- **Headquarters:** New Delhi
- It is a central agency to investigate and prosecute offences related to terrorism and certain other Act post-2008 Mumbai terror attacks such as:
  - Affecting the sovereignty, security and integrity of India, security of State, friendly relations with foreign States.
  - Against atomic and nuclear facilities.
  - Smuggling in High-Quality Counterfeit Indian Currency.
- It implements international treaties, agreements, conventions and resolutions of the United Nations, its agencies and other international organisations.
- It's objective is also to combat terror in India. It acts as the Central Counter-Terrorism Law Enforcement Agency.

The state's "suspicion" that they are engaged in terrorism is enough.

- **Undermines Federal Spirit:** Some experts feel that it is against the federal structure since it neglects the authority of state police in terrorism cases, given that 'Police' is a state subject under 7th schedule of Indian Constitution.
- **Low Conviction Rate:** The fact that only 2.2 % of cases registered under the UAPA between the years 2016-2019 have ended in convictions by court highlights the above issues associated with this act.

Way Forward:

- **Prevent Misuse:** The government needs to ensure that the law is not misused to harass genuine social activists.
- **Effective Law enforcement:** It needs to ensure that there are effective law enforcement mechanisms with checks and balances to prevent and punish terrorist attacks and it is put only to this use.
- **Higher standards of proof** must be applied for conviction and there must be provisions like compensation to victims or punishment/enquiry against those who bring malicious complaints.
- **Judiciary** needs to play an active role and provide early bail to the falsely accused and quash the baseless proceedings at early stage itself.
- In civilised nations (from whom India has copied its Constitution and all its laws) the criminal justice system is about the rights of the accused. That is also the foundation of our justice system.
- The very idea of the UAPA and the decision to start naming people terrorists without securing a conviction from a court of law, thus goes against the principles of natural justice.

HARD LINE

The UAPA Bill, 2019, amends the unlawful Activities (Prevention) Act, 1967. Some highlights:

TERRORISM: Under the Act, the central government may **designate an organisation as a terrorist** organisation if it: (i) commits or participates in acts of terrorism, (ii) prepares for terrorism, (iii) promotes terrorism. or (iv) is involved in terrorism. The Bill additionally **empowers the government to designate Individuals as terrorists** on the same grounds.

SEIZURE OF PROPERTY: Under the Act, an **investigating officer must obtain prlor approval of the DGP** to seize properties that may be connected with terrorism. If the investigation is conducted by an officer of the National Investiga-tion Agency (NIA), the approval of the Director General, NIA is mandatory

INVESTIGATION: Under the Act, investigation of cases may be conducted by officers of the rank of DSP or ACP or above. Officers of the NIA, of the rank of Inspector or above, can also investigate cases.

Feature Article

LATERAL ENTRY IN CIVIL SERVICES

UPSC has issued an advertisement to recruit 30 persons at the Joint Secretary and Director level in the Central administration through lateral entry.

About:

- The government aims to bring in domain expertise from the private sector to the Central administration, which also faces a shortage of IAS (Indian Administrative Service) officers working on deputation in the Centre.
- The basic qualification for a Joint Secretary lateral entrant is 15 years of work experience, and for Directors, it is 10 years of work experience.

Lateral entry:

- Lateral entry refers to the appointment of specialists from the private sector in government organizations.
- It is an attempt by the government to bring in fresh talent into the bureaucracy.
- It is an old idea that had been recommended by the 2nd Administrative Reform Commission, and a plethora of think tanks in the past.

Arguments in favor of lateral entry:

- Urgent need of specialists and professionals
  - With the advent of globalization, the administration is faced with a new series of challenges activated by technological improvements.
  - Most civil servants, as opposed to being specialists, tend to be "generalists" and thus may not be competitive enough to handle the new challenges.
  - Lateral entry can thus provide "specialists" which will help in improving service delivery.
- **Shortage of manpower:** According to Department of Personnel and Training data there is a shortage of about 1500 IAS officers. Lateral entry will help in bridging this gap.
- **Recruitment at the young age:**
  - IAS officers get recruited at a very early age via the UPSC exams which makes it difficult to gauge their administrative judgment and capabilities then.
  - Due to regular shuffling after short tenures from one to the other department, some in the later stages may lack the required skillset and may not be able to handle the challenges and pressure required by the job.
- **To kill lethargic attitude and make bureaucrats competitive:**
  - Career promotions in the IAS move along seamlessly with few impediments along the way. Attempts to introduce 'meritocracy' haven't quite worked out and this pushes the bureaucrats into their comfort zone.
  - It will help in bringing change in organization culture in Government sector culture. It will help in bringing the values of economy, efficiency, and effectiveness in the Government sector.
- **Professionals already hired have proven their worth**
  - The government has continuously hired professionals in the top tier or the government like Finance Ministry, Reserve Bank of India, and even the current NITI Aayog.
  - The experts in these services have time and again helped India deal with the various socio-economic crisis.
- **Liberalization in 1991 has compelled State to cede more space to markets and ensure participative governance**
  - Thus, it becomes more critical for the government to ascertain the impact its policy decisions have on various stakeholders such as the private sector, non-profits, and the general public. Lateral entry may help bring the interests of these stakeholders in policymaking.

Arguments against lateral entry and issues involved:

- **Higher administration requires grassroots experience and little technical knowledge**
  - Experts in a particular field might be bereft of any engagement with the common public – primary stakeholders of a policy decision – at the grassroots level while civil servants acquire experience of fieldwork and policy making and implementation at the grassroots due to his postings and appointments to differing departments.
- **Tough for outsiders to overcome political processes and adapt to the public welfare system**
  - Some of the new officers will face adjustment problems while working with the government as they will be constrained by political processes.
  - They may not know the nuances of the system which can be exploited against them in any number of ways.
  - Also, the private-sector approach is profit-oriented while the government is in public welfare service.
- **Little Impact in lower rungs:** Lateral entry at only at top level policy making positions may have little impact on field level implementation, given the multiple links in the chain of command from the Union Government to a rural village.
- **Conflicts between outsiders and insiders**
  - Lateral entrants from the private sector and academia may not work well with the bureaucracy.

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- Differences in work culture, turf wars, and systemic inertia often come in the way.
- The IAS establishment is likely to balk at lateral entrants who haven't made it through probably the hardest open competitive exam in the world, but because of privilege and social networks.

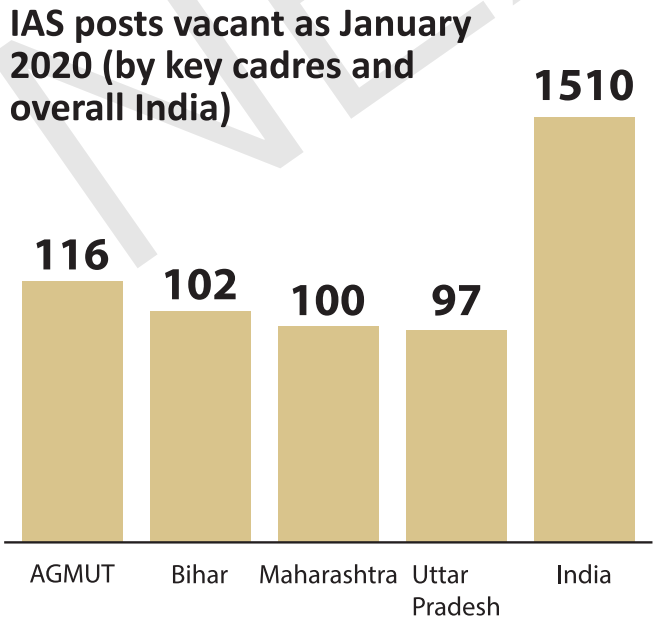
- **Spoils System and Private Lobbies**
  - Currently, UPSC is still considered to be a credible, transparent, and autonomous procedure to recruit people into the bureaucracy.
  - However, the selections for lateral entries in some cases may not be done by the UPSC but by a select committee through interview processes which may institutionalize nepotism.
    - In this advertisement, govt has done well to make UPSC the recruiting agency for the hiring of experts. This is a welcome move.
- **Undermining representation of marginalized sections**– There is no clarity on reservations for the members of Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC) in the lateral entry process.

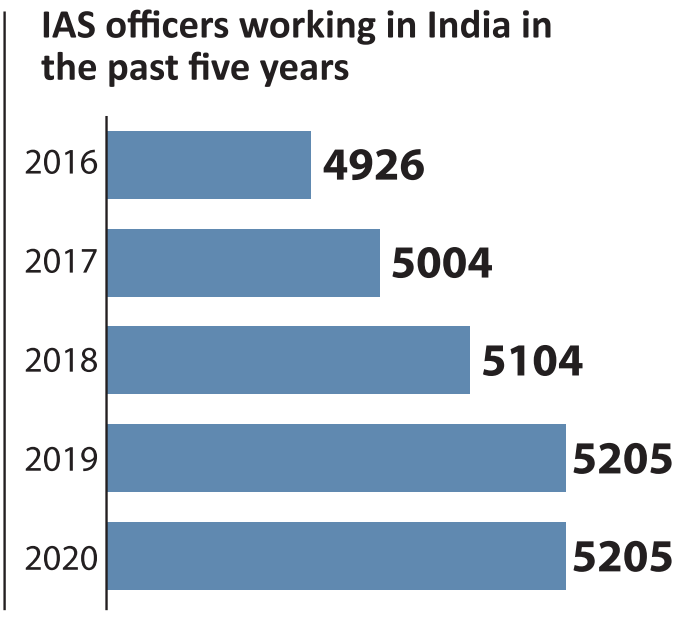
Way Forward:

- Considering the benefits lateral entry can offer, there is a need to devise a rational basis to fill policy-making positions with those possessing required qualifications and competence whether from the private sector.
- A suitable training program is also needed to help lateral entrants to understand the objectives and functioning of the government and thereby adapt to the political hurdles of the country.
- Entrusting the job of selection of lateral entrants to a body supervised by the UPSC is the best way forward to ensure that merit is the sole criteria and no scope exists for preferential induction on grounds of the region, community, or ideological allegiance.
- Also, as per the country's needs, the system needs to allow specialization to emerge gradually through a process of deliberate iteration at the mid-career level for the young officers selected through civil services exams.
  - This will facilitate officers in specializing as they move up the hierarchy based on their revealed aptitude and performance record.
- There is no doubt that the civil service, which forms the backbone of Indian administration, needs reforms. The country's progress and development depend on this. Even if lateral entry is introduced, it must follow a strictly defined procedure and not give way to nepotism and further

BRIDGE TOO SHORT

Vacancies in the Indian Administrative Service have risen, as hiring of officers dipped post liberalization.





Source: *Department of Personnel and Training, GoI*

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Feature Article

SEDITION LAW

Supreme Court has protected several leaders and journalists from arrest in multiple sedition FIRs registered against them for allegedly tweeting and sharing unverified news during Republic day violence.

About:

- The FIR stated that the accused, through their "fake, misleading and wrong" tweets "tried to imply that the death of the farmer was caused by the violence committed by Delhi Police.
- It said that the tweets were posted with an intent to engineer largescale riots and religious tension among different communities.
- The court stayed any coercive action or arrest against the accused and scheduled further hearing on merits.

Sedition law:

- **Section 124A of the Indian Penal Code (IPC),** which deals with sedition, was drafted by Thomas Babington Macaulay and included in the IPC in 1870.
- **It defines Sedition** as every speech or expression that "brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards the government established by law in India".
- Sedition is a cognizable and non- bailable criminal offence punishable with a maximum sentence of life imprisonment.
  - **Cognizable** - the investigation process (including the powers to arrest) can be triggered merely by filing an FIR, without a judicial authority having to take cognizance.
  - **Non-bailable** - the accused cannot get bail as a matter of right, but is subject to the discretion of the session's judge.

Famous sedition trials during freedom movement

- Some of the most famous sedition trials of the late 19th and early 20th century involved Indian nationalist leaders. The initial cases that invoked the sedition law included numerous prosecutions against the editors of nationalistn ews papers.
- The first among them was the trial of Jogendra Chandra Bose in 1891. Bose, the editor of the newspaper. Bangobasi, wrote an article criticizing the Age of Consent Bill for posing a threat to the religion and for its coercive relationship with Indians.
- The most well-known cases are the three sedition trials of Bal Gangadhar TilaksaA the trial of Mahatma Gandhi in 192 2. Gandhi was charged, along with Shankerlal Banker, the proprietor of Young India, for three articles published in the weekly.

Arguments in favor of sedition Law:

- Sovereign countries, including the US, the UK, Canada, Australia and other democracies, have such provisions in their penal code.
- The freedom of speech in a country is not a license to spread disaffections hence Sedition law helps in curtailing it.
- Calls for violent revolutions seeking to overthrow the government, appeals for a separate Khalistan or Kashmir and other atrocity propaganda, which does not qualify as protected speech and has the ability to denude the legitimacy of a democratically elected government.
  - Many districts in different states face a Maoist insurgency and rebel groups virtually run a parallel administration. These groups openly advocate the overthrow of the state government by revolution.
- Supreme Court has repeatedly observed that the mere possibility of misuse of a provision does not per se invalidate the legislation. In such cases, the vulnerability extends only to the 'action' and not the 'section'.
- Thus, section 124 A is needed to effectively combat anti-national, secessionist and terrorist elements.
- It protects the elected government from attempts to overthrow the government with violence and illegal means thereby ensuring stability of the state.
- If contempt of court invites penal action, contempt of government should also attract punishment.
- It is ill-advised to repeal sedition law merely because it has been wrongly invoked in some highly publicized cases.
  - It falls on the judiciary to protect Articles 19 and Article 21 of the Constitution and it will ensure that the law is not misused.

Arguments against sedition Law:

- Section 124 A is a constraint on the legitimate exercise of constitutionally guaranteed freedom of speech and expression under article 19.
- Dissent and criticism of the government are essential ingredients of robust public debate in a vibrant democracy. They should not be constructed as sedition.
  - Right to question, criticize and change rulers is very fundamental to the idea of democracy.
- The terms used under Section 124A like 'disaffection' are vague and subject to different interpretation to the whims and fancies of the investigating officers.

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- It is thus often misused as a tool to persecute political dissent.
- It is being invoked even in cases where there is no incitement to violence or tendency to create public disorder.

- The British, who introduced sedition to oppress Indians, have themselves abolished the law in their country. There is no reason, why should not India abolish this section.
- IPC and Unlawful Activities Prevention Act have provisions that penalize "disrupting the public order" or "overthrowing the government with violence and illegal means".
  - These are sufficient for protecting the national integrity. There is no need for Section 124A.
- It is inconsistent with India's international commitments under International Covenant on Civil and Political Rights (ICCPR) which has set high standards for the protection of freedom of expression.

Landmark judgements:

- **In Kedar Nath Singh vs. State of Bihar case, (1962)** Supreme Court upheld the constitutionality of sedition, but limited its application to "acts involving intention or tendency to create disorder, or disturbance of law and order, or incitement to violence".
- **In Balwant Singh vs. State of Punjab (1995),** Supreme Court held that mere sloganeering that evoked no public response did not amount to sedition.
- **In Common Cause v. Union of India 2016**, the court reiterated the Kedarnath law directing all authorities to scrupulously follow the Kedarnath dictum.
  - **The SC has, however, not had a chance** to reopen the issue of constitutionality of Section 124A since 1962.

Rise in sedition charges in India but poor conviction:

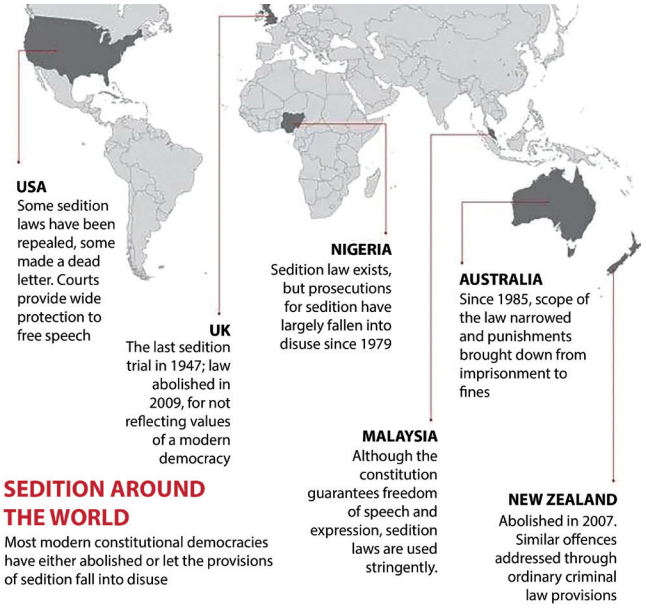
- According to records from the National Crime Records Bureau (NCRB), which has only been collecting data on sedition cases since 2014, there has been rise in sedition cases from 47 in 2014 to 70 in 2018.
- Though police across India's states are charging more people with sedition, few cases actually result in a conviction.
  - In fact, since 2016, just four sedition cases have seen a conviction.
- According to an independent study in the last five years, the number of sedition cases filed against individuals has risen by an average of at least 28% each year.
- In rise of the sedition cases in the country, activists have been demanding repealing of the sedition act and even Law commission has recommended a rethink on this law.

Law commission viewpoint:

- In its 39th Report (1968), the Law Commission had rejected the idea of repealing the section.
- In its 42nd Report (1971), the panel wanted the scope of the section to be expanded to cover the Constitution, the legislature and the judiciary, in addition to the government to be established by law.
- However, in 2018, the Law Commission of India published a consultation paper recommending that it is time to re-think or repeal the Section 124A of the Indian Penal Code that deals with sedition.
  - It has suggested invoking 124A to only criminalize acts committed with the intention to disrupt public order or to overthrow the Government with violence and illegal means.

Way Forward:

- The definition of sedition should be narrowed down to cover only acts which threaten the sovereignty and integrity of India.
- There should be clear procedural guidelines to law enforcing agencies and they need to be held accountable for their action.
- Higher standards of proof must be applied for conviction and there must be provisions like compensation to victims or punishment/enquiry against those who bring malicious complaints
- Supreme court should take up this section again to
  - Review its constitutionality under present circumstances.
  - Check sedition law validity as a reasonable restriction on free speech.
- In the meantime, judiciary should set up a search committee in every State to Suo-moto check each sedition case being filed.
  - And if it is baseless, it must be quashed without putting the onus on the citizen to come to the court.


USA
Some sedition laws have been repealed, some made a dead letter. Courts provide wide protection to free speech
UK
The last sedition trial in 1947; law abolished in 2009, for not reflecting values of a modern democracy
NIGERIA
Sedition law exists, but prosecutions for sedition have largely fallen into disuse since 1979
AUSTRALIA
Since 1985, scope of the law narrowed and punishments brought down from imprisonment to fines
MALAYSIA
Although the constitution guarantees freedom of speech and expression, sedition laws are used stringently.
NEW ZEALAND
Abolished in 2007. Similar offences addressed through ordinary criminal law provisions
SEDITION AROUND THE WORLD
Most modern constitutional democracies have either abolished or let the provisions of sedition fall into disuse

Feature Article

AGEING DAMS

A report titled 'Ageing water infrastructure: An emerging global risk' throw light on dams in India.

About:

The report was published by United Nations University's 'Institute for Water, Environment, and Health', based in Canada. According to the report:

- Most of the 58,700 large dams worldwide were constructed between 1930 and 1970 with a design life of 50 to 100 years.
- At 50 years, a large concrete dam "would most probably begin to express signs of aging".
- This may result in increasing cases of dam failures, progressively increasing costs of dam repair and maintenance, increasing reservoir sedimentation, and loss of a dam's functionality and effectiveness.
- Nearly 50 percent of global river volume is already fragmented or regulated by dams, there is a lack of location for the building of new dams.
- The report said that 55 percent of the world's total large dams are found in just four Asian countries: China, India, Japan, and South Korea and a majority of these will reach the 50-year threshold soon.

Status of Dams in India:

- **National Register of Large Dams (NRLD):** According to the register maintained by the Central Water Commission, there are 5334 completed Large dams in India and 411 dams are under construction at the end of 2019.
- **Ageing of dams:** According to the report, in India, over 1,115 large dams will be roughly 50 years old in 2025, more than 4,250 large dams in the country will be over 50 years old in 2050 and 64 large dams will be more than 150 years old in 2050. For example, the Krishna Raja Sagar dam was built in 1931, Mettur dam was constructed in 1934. Hundreds of old dams require urgent attention for ensuring their structural safety and operational efficiency.

Definition

A 'Large dam' is defined as per the definition of International Commission on Large Dam (ICOLD). The two main criteria are:

- A dam with a height of 15 metres or greater from lowest foundation to crest.
- A dam between 5 metres and 15 metres impounding more than 3 million cubic metres of water.

- **Out-of-date design:** In the case of several old dams, the adopted design practices, and safety considerations were inadequate compared to the present need. The flawed designs underestimated the rate of siltation and overestimate the live storage capacity created. Consequently, the storage capacity in Indian reservoirs is receding at a rate faster than anticipated.

Problems caused by ageing dams:

- **Loss of Human Lives:** Old dams are at risk of dam failure which would destroy lives and properties. . The dam has significant structural flaws and it has been built in a seismically active area,"
- **Sediment deposition:** Silt accumulation reduces the water carrying capacity of the reservoir. Consequently, there would be a lack of water for use and an increased risk of flooding.
- **Dam Management:** Old dams were built at a different time which may not resemble the present. For example, the management of the Mullaperiyar dam is a contentious issue between Kerala and Tamil Nadu.
- **Inspection and monitoring Dam safety:** . As per the regulation of the Central Water Commission, each dam owner should carry out pre and post-monsoon inspections, covering site conditions, dam operations every year. However, according to a CAG report on flood forecasting, from 2008 to 2016, only two states out of 17 states had carried out such inspections.
- **Lack of Institutional decision-making mechanism:** Often opening or closing of dams depends on the discretion of a single person due to a lack of institutional and objective decision-making process. There is a requirement for an automated decision-making process based on the Early Warning System.
- **Water Scarcity:** Inadequate water for domestic, industry, or farming activity would lead to overexploitation of groundwater, reduction in farmers' income, net sown area, and agricultural productivity. A decline in industrial activity would lead to unemployment and cause economic distress.
- **Restoration of Natural ecosystem:** There is a need for decommissioning of old dams for the restoration of river habitat. And new dams may be built after considering local factors such as climate and catchment areas.

Institutional Mechanism for management of Dams in India:

- **Seventh Schedule:** As per the constitution of India, states have the power to make laws on the water including water storage and water power. Dams in India are maintained by the State

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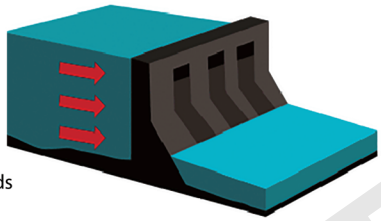
Governments. Also, some organizations own and operate dams. For example, Bhakra Beas Management Board (BBMB), Damodar Valley Corporation (DVC), and National Hydro-Electric Power Corporation (NHPC).

- **Central Dam Safety Organisation:** The Central Dam Safety Organisation, under the Central Water Commission (CWC), provides technical assistance to dam owners, and maintains data on dams.
- **The National Committee on Dam Safety:** It devises dam safety policies and regulations.
- **State-level Dam Safety cell/organizations:** Currently, 18 states and four dam owning organizations have their own Dam Safety Organisations.

DAM FAILURE?

- When inflow into catchment area exceeds discharge from the spillway, water may overflow the dam
- Sustained overtopping for hours can erode its mass and reduce the weight which holds it in place
- Its weight stabilises a dam against the hydraulic pressure of water stored behind it. If eroded, it can break



EARLY WARNING SYSTEMS

- Rain gauges to signal rising water levels are a key tool for protection of dams
- Some big dams including those in Bhima river basin have warning stations now
- But such automated mechanism is missing at most of the smaller dams

Public Programs:

- **Dam Rehabilitation and Improvement Project (DRIP):** The Central Water Commission (CWC) is coordinating the implementation of this World Bank assisted project. Its objectives include
  - Rehabilitation and Improvement of dams and associated appurtenances
  - Dam Safety Institutional Strengthening in participating States and CWC
- **Dam Health and Rehabilitation Monitoring Application (DHARMA)** software is an institutional component of DRIP.

Legislations:

- **The Dam Safety Bill-2019**
  - The Bill provides for the surveillance, inspection, operation, and maintenance of all specified dams across the country Dam owners will be responsible for the safe construction, operation, maintenance, and supervision of a dam. They must provide a dam safety unit in each dam.
- **The bill constitutes two national bodies:**
  - **National Committee on Dam Safety:** Its functions include evolving policies and recommending regulations regarding dam safety standards;
  - **National Dam Safety Authority:** Its functions include implementing policies of the National Committee, providing technical assistance to State Dam Safety Organisations (SDSOs), and resolving matters between SDSOs of states or between a SDSO and any dam owner in that state.
- The bill constitutes two state bodies that will be responsible for the surveillance, inspection, and monitoring of the operation and maintenance of dams within their jurisdiction.
- State Committee on Dam Safety
- State Dam Safety Organisation.

Issues with the Dam Safety Bill:

- **Centre violating the spirit of Federalism:** As per the Constitution, states can make laws on the water including water storage and water power. However, Parliament may regulate and develop inter-state river valleys if it deems it necessary in the public interest.
- **Functions of the institutions:** The functions of the National Committee on Dam Safety, the National Dam Safety Authority, and the State Committee on Dam Safety are listed in Schedules to the Bill. These Schedules can be amended by the government through a notification.

Way Forward

- **Alternative ideas:** There is a need to develop ideas and practices on the alternative types of water storage, nature-based solutions, and types of energy production beyond hydropower.
- **Dam decommissioning:** Dam decommissioning should be seen as equally important as dam building in the overall planning process on water storage infrastructure developments.
- **Disaster Risk reduction:** Adopt preventive mechanism such as an automated early warning system to avoid dam failures.
- **Understanding the importance:** By 2050, the country faces scarcity of water which creates challenges to feed the rising population, grow abundant crops, create sustainable cities, or ensure growth. All stakeholders must come together to address this situation urgently.

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Feature Article

JOURNALIST PRIYA RAMANI JUDGEMENT

Journalist Priya Ramani was acquitted in the defamation case filed by former Union minister MJ Akbar.

About:

- Recently a Delhi trial court acquitted journalist Priya Ramani in a criminal defamation complaint filed by former Union Minister M.J. Akbar over her allegations of sexual harassment against him.
- **Court's Observation:** The court said that the women cannot be punished for raising their voice against the sex abuse on the pretext of criminal complaint of defamation filed against them, as the "right of reputation cannot be protected at the cost of the right to life and dignity of women" as guaranteed under article 21 in Indian constitution.
- Women have a right to put their grievance at any platform of their choice and even after decades.
- **Significance of the verdict:** The verdict upholds women's right to share their experiences of sexual harassment whenever they are comfortable. It also disregards claims to male respectability in a patriarchal society.
  - It also approves any future moves by women in support of campaigns similar to #metoo movement.

Legal Provisions against Sexual Harassment in India:

- **Meaning:** Sexual harassment means a gross violation of women's right to dignity and equality. It has its roots in patriarchy i.e. there is assumption that men are superior to women and some forms of violence against women are acceptable. Nearly half of the total number of total sexual harassment crimes against women are related to the molestation and harassment at the workplace.
- With the increase in employment opportunities for women and increasing work participation rate of women made it important to enact a comprehensive law focusing on prevention of sexual harassment along with a redressal mechanism, starting with Vishakha Guidelines and later Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act was passedand enacted in 2013.
- The Supreme Court of India in 1997 in the case of **Vishakha vs. state of Rajasthan** provided the first ever authoritative decision of 'sexual harassment' in India and filled the statutory vaccum for the protection of women at worlplace.
- It asked the employers, dealing with complaints of sexual assault and mandated the formation of committees to dispose of complaints from victims of sexual harassment. These guidelines by the Supreme Court came to be known as Vishakha Guidelines.
- Seventeen years after the Vishakha Guidelines were pronounced, the Parliament woke up from its deep slumber and passed the Sexual Harassment at Workplace (Prevention, Prohibition and Redressal) Act, 2013.

Issues with Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act:

- It fails to cover women working in the agricultural sector and armed forces, which are mainly men dominated sectors.
- Secondly, the act appears to be gender biased as it only protects women.
- The act has a scope for false allegations because there are chances that these laws may be misused at the hands of women for their personal benefits.
- The provision regarding the fixing of the monetary compensation makes it discriminatory since the person with high rank and status will be made to pay more than the person with low status.
- A 2015 study by the Federation of Indian Chambers of Commerce and Industry suggested that 35% of Indian companies and 25% of multinational corporations in India were not compliant with this Act.
- The implementation of law is also worrisome. Some people who are in very influential positions are accused and they have got away with it. Wherever the accused has been influential they have got a free hand. It creates a sense of alienation, disbelief about the law.
- The most common response has been of filing defamation complaints and suits by alleged harassers against complainants. As Justice Chandru (Retd) of the Madras High Court stated in one instance, "it is a classic case, where the complainant has become the accused, and the accused became the complainants".

Way Forward:

- **Strict implementation of the law**. Every woman employee in the country should be aware about the law. The confidence building measures should be taken among the women, so that they can use the laws in case they are harassed in any manner.
- **Weekly gender sensitisation workshops** should be organised at work places to bring the psychological parity among the male employees.

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Legislations for Protection of Women at Workplace

Vishakha Guidelines:

- All employers in India, both in the private or public sector should take necessary steps to prevent sexual harassment.
- Appropriate work conditions should be provided in respect of work, leisure, health and hygiene and to make sure that there is no hostile environment towards women and no woman should have grounds to believe that she is discriminated against in connection with her employment.
- When any conduct amounts to specific offences under the Indian Penal Code or any other law, the employer shall start appropriate action in line with the law, by making a complaint with the competent authority.
- The Victims of sexual harassment should have the option to ask for transfer of the accused or their own transfer.
- Employers must form a Complaints Committee and it should be headed by a woman. At Least half the members of the committee must be women.
- Employers should also assist the women affected in cases of sexual harassment by outsiders.
- Central and State governments are required to adopt measures including legislation to ensure that private employers also observe the vishakha guidelines.

Sexual Harassment of Women at Workplace (Prevention, Prohiition and Redressal) Act, 2013:

Sexual Harassment of Women at Workplace (Prevention, Prohiition and Redressal) Act was passedand enacted in 2013.

- Sexual harassment is any unwelcome sexually defined behaviour which can range from misbehaviour of an irritating nature to the most serious forms such as sexual abuse and assault, including rape.
- The Sexual Harassment of Women (Prevention, Prohibition and Redressal) Act 2013 defines sexual harassment to include any one or more of the following unwelcome acts or behaviour (whether directly or by implication) namely:
  - Physical contact and advances
  - A demand or request for sexual favours
  - Making sexually coloured remarks
  - Showing pornography
  - Any other unwelcome physical, verbal or non-verbal conduct of a sexual nature.
- The Act covers the rights of all women working or visiting any workplace, in any capacity.
- Every employer must constitute an Internal Complaints Committee (ICC) at each office or branch having 10 or more employees, so that women victims can complain.
- The identity of the woman, respondent, witness, any information on the inquiry, recommendation and action taken should not be made public.
- Time-frame – The complaint has to be made "within 3 months from the date of the incident".
- The ICC may forward the complaint to the police under Indian Penal Code Section 509.
- The ICC can itself start an inquiry that has to be completed within 90 days.
- The ICC has similar powers to those of a civil court.
- If the allegations are proved, the ICC recommends that the employer take action for sexual harassment.
- After the recommendations, the aggrieved woman or the respondent can appeal in court within 90 days.
- In a case of false/malicious complaint and false evidence, ICC "may recommend" the employer to take action against the woman who has made the complaint.
- The ICC "may", before the inquiry, take steps to settle the matter between the victim and respondent through conciliation.
- This is only possible "at the request of the aggrieved woman," and provided that no monetary settlement is made as a basis of conciliation.

- **In the medium and long term we need to bring the attitudinal change**, how we raise the sons in the families, how we make men respect women in the family and in the private spaces will matter.
- **The socialisation process** and education are the cornerstone for making the man much more sensitive while dealing with women.
- **According to an American feminist scholar, Janet Halley,** the struggle for affirmative consent shall be fought in the real world and not in the courtrooms.
  - According to her, the struggle for sexual consent of women should have the following features,
  - One, promoting individual freedom to decide the course of one's own sexual engagements.
  - Two, affirmative consent has to be realized through legal actions by the engagement with the state.

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1 ECONOMY

REGULATORY COMPLIANCE PORTAL

Department for Promotion of Industry and Internal Trade (DPIIT) has launched a regulatory compliance portal to reduce the regulatory compliance burden of citizens and businesses.

About:

- **The objective** of this portal is to act as a bridge between citizens, industries, and the Government to minimize burdensome compliances.
- It will also act as a first-of-its-kind central online repository of all Central and State-level compliances
- **Department for Promotion of Industry and Internal Trade (DPIIT),** Ministry of Commerce and Industry will act as the nodal department.
- All Central Ministries/Departments and States/UTs would
  - Examine all laws/regulations/rules under their purview
  - Implement an Action Plan to rationalize and simplify all the processes and remove burdensome compliances, decriminalize laws and repeal redundant Acts.
- These details would be captured and tracked on the Regulatory Compliance Portal.
- **Industry stakeholders** from trade bodies such as CII, FICCI, and ASSOCHAM would also be able to submit compliances and proposed recommendations.
- Performance of activities on this portal would be closely reviewed by concerned Government authorities and suitable action would be undertaken to minimize the regulatory compliance burden.
- Cabinet Secretary would have a real-time comprehensive view of all compliances and status of all requests raised across Central Ministries/Departments and States/UTs.
- The Regulatory Compliance Portal will be instrumental in achieving the vision of a truly Atmanirbhar Bharat and help usher ease of doing business for industry and ease of living for citizens.

BUDGET PROPOSES ASSET RECONSTRUCTION COMPANY (ARC) TO BE SETUP BY BANKS

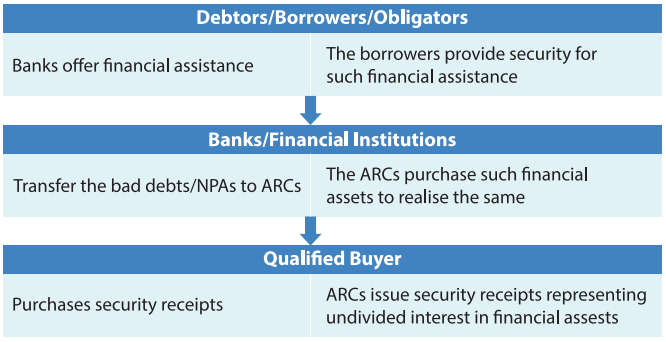
The Budget 2021-22 has proposed Asset Reconstruction Company (ARC) to be set up by state-owned and private sector banks with no equity contribution from the government.

About:

- **Asset Reconstruction Company (ARCs):** It is a financial institution that buys the debtors of the bank at a mutually agreed value and attempts to recover the debts or associated securities by it.
- They take over a portion of the debts of the bank that qualify to be recognized as Non-Performing Assets.
- Thus, ARCs act as a subsidiary of a bank to recover Non-performing Assets.
- **Legal backing:** An asset reconstruction company is a company registered under Section 3 of the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SRFAESI) Act, 2002.
- **It is regulated by Reserve Bank of India** as a Non Banking Financial Company.
- **Liable for Secured Debts:** The ARC can take over only secured debts which have been classified as a non-performing asset (NPA).

Methods by which ARC carry out the process of asset reconstruction:

- It provides for Change or takeover of the management of the business of the borrower.
- ARCs can put such business on Sale or lease.
- It can reschedule the payment of debts and offers alternative schemes, arrangements for the payment of the same.
- It enforces the security interest offered in accordance with the law.
- It takes possession of the assets offered as security.
- It manages assets by converting a portion of the debt into shares and bidding in the open market.


Debtors/Borrowers/Obligators
Banks offer financial assistance
The borrowers provide security for such financial assistance
Banks/Financial Institutions
Transfer the bad debts/NPAs to ARCs
The ARCs purchase such financial assets to realise the same
Qualified Buyer
Purchases security receipts
ARCs issue security receipts representing undivided interest in financial assests

- **Capital requirements:** According to Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002, minimum capital requirement for ARCs was Rs. 2 crore, which has now been revised to 100 cr by Reserve Bank of India.

NEXT IAS

- **Capital Adequacy Ratio:** The ARCs have to maintain minimum capital adequacy ratio of 15% of its risk weighted assets.
- **Risk-weighted assets:** These are those assets which are used to determine the minimum amount of capital that must be held by banks and other financial institutions in order to reduce the risk of insolvency.
  - **For Example:** A loan that is secured by a letter of credit is considered to be riskier and thus requires more capital than a mortgage loan that is secured with collateral.

Significance of the proposal:

- **Need for Frequent Insolvency:** Currently stressed assets of Rs 2-2.5 lakh crore remain unresolved in around 70 large accounts.
  - Hence, there is need for frequent insolvency procedures.
- **Need for capital infusion:** Currently, of the existing ARCs, only 3-4 of them are adequately capitalized.
  - More than a dozen remaining ARCs are thinly capitalized.
  - Hence, there is a need to set up a new structure to resolve stressed assets urgently.
  - While the government will not provide any direct equity support to the ARC, it will provide sovereign guarantee that could be needed to meet regulatory requirements.
  - This will infuse capital in form of investment from the market.
- **Market oriented solution:** The step by the government will help to provide market oriented solution to problem of Non-performing assets.

Way Forward:

- Rising NPA is one of the most challenging problem which has been caused due to dual balance sheet problem of failing banks and corporates.
- Frequent resolution of NPA is also one of the parameters which is needed for ease of doing business in India.
- Market oriented capital infusion with sovereign guarantee by central government will benefit AMCs and thus will provide for faster resolution of cases.

CONNECTIVITY PROJECTS IN ASSAM

Recently, Prime Minister Narendra Modi launched multiple connectivity projects in Assam.

About:

- The projects launched include Mahabahu-Brahmaputra inland waterway project and the foundation stone of two bridges across the Brahmaputra.
- The projects are a continuation of a slew of similar development and infrastructure announcements by the government in Assam.

Mahabahu-Brahmaputra Initiative:

- To mark the Rs 3,200 crore Mahabahu-Brahmaputra initiative — aimed at improving water transport connectivity — three Ro-pax vessel were inaugurated between **Neemati Ghat (Jorhat) and Majuli island**, North Guwahati and South Guwahati as well as Dhubri and Hatsingimari.
- He also laid the foundation stone of Inland Water Transport (IWT) Terminal at **Jogighopa** and various tourist jetties on the Brahmaputra and launched two portals for ease-of-doing-business.

Longest Bridge on Brahmaputra (Dhubri-Phulbari Bridge):

- The PM also laid the foundation stone for a 19-km-long four-lane bridge over the Brahmaputra — which will be India's longest bridge over a river — that connects **Dhubri in Assam and Phulbari in Meghalaya,** to be constructed at the cost of Rs 5,000 crore.
- The 19.8-km-long bridge had been proposed four years ago by the **National Highways and Infrastructure Development Corporation Limited (NHIDCL),** which falls under the Ministry of Road Transport and Highways, to reduce the distance between Dhubri in Assam and Phulbari in Meghalaya.
- The bridge will replace the 9.1-km-long **Bhupen Hazarika Setu,** also known as the Dhola-Sadiya Bridge in eastern Assam, as India's longest bridge.
- **Dhubri and Phulbari lie on either bank of the extremely wide Brahmaputra** just before it flows into Bangladesh. But the road distance between them is currently about 210 km, via the Naranarayana Setu between the Bongaigaon and Goalpara districts.
- Phulbari is in a remote part of Meghalaya's West Garo Hills district, and people of the region do not have a hospital nearby — they have to rely on the district hospital in Dhubri, which is quite inaccessible in an emergency.
- Both regions lag behind on a lot of other indicators too, but with the new bridge, there is hope of upliftment.
- The improved connectivity will enhance the reach and export of perishable farm goods from Meghalaya and Assam to these two neighbouring countries.
- **Two lane bridge between Kamalbari and Neematighat:** A 6.8-km-long two-lane bridge would connect Kamalabari in Majuli, the world's largest river island to Neematighat in Jorhat.

The Way Forward:

- The North-Eastern India is important for the strategic interests of India. It is also one of the most important pillars for India's Act East Policy.
- Enhancing the regional connectivity will boost the untapped potential of the economy and help the local population.

RETAIL INVESTORS TO BE ABLE TO BUY G-SECS DIRECTLY

RBI has announced that it will allow retail investors to invest in government securities directly and without the help of intermediaries.

About:

- The Reserve Bank of India (RBI) will now allow retail investors to open gilt accounts with the central bank to invest in government securities directly and without the help of intermediaries.

What are G-secs?

- Government Security (G-Sec) is a tradable instrument issued by the Central Government or the State Governments.
- It acknowledges the Government's debt obligation.
- As these debt instruments are issued by the government, these carry very low risk associated with them.
- Treasury Bills (T-bills), Cash Management Bills (CMBs), dated G-Secs, and State Development Loans (SDLs) are some of the government securities which are available in the market.

How are G-Secs sold by the government currently?

- **Restricted participation:** Currently, Government issues its securities through RBI, which in turn issues to Commercial banks, primary dealers (PDs) and institutional investors like insurance companies.
- Other participants of G-secs market are mutual funds, regional rural banks, co-operative banks, provident and pension funds.
- Individual investors have to currently buy G-secs through these intermediaries.

Advantages of allowing retail investors in G-sec market:

- **Encourages retail investment:** The step will help to increase the retail investment in government securities by making them available to fingertips of the investors. The step will allow a specific retail segment in the secondary market.

Facts for Prelims

Types of government securities:

- **Treasury Bills:** Treasury bills or T-bills can be issued only by the central government.
  - They are short-term money market instruments with a maturity period of less than one year.
  - Treasury bills are issued with three different maturity periods: 91 days, 182 days, and 364 days.
  - The Treasury bills are zero coupon securities.
- **Cash Management Bills:** Cash Management Bills are zero coupon securities. These securities have maturity periods less than 91 days.
  - These securities are used by the government of India to meet any temporary cash flow requirements.
- **Dated G-Secs:** G-Secs are long-term money market instruments with maturity period starting from 5 years and going all the way up to 40 years.
  - These instruments come with a fixed as well as a floating interest rate.
  - There are around 9 different types of dated G-Secs currently issued by the government of India.
- **State Development Loans (SDLs):** SDLs are issued by the state governments of India to fund their activities and to satisfy their budgetary needs.
  - These are similar to dated G-Secs with a wide range of investment tenures.

Key Terms:

- **Zero coupon securities/Bonds:** These types of securities are often sold at discounted price in financial markets. On maturity seller gets face value of the zero coupon bonds.
- **Fixed Interest Rate Vs Floating Interest rate:** A floating interest rate is an interest rate that moves up and down with the market or an index such as inflation index. In floating or variable interests rates, the mortgage interest rates can change periodically with the market.
- **Primary Market:** A primary market issues new securities on an exchange for companies, governments, and other groups to obtain financing through debt-based or equity-based securities.
  - Primary markets are facilitated by underwriting groups which consists of investment banks that set a beginning price range for a given security and oversee its sale to investors.
- **Secondary Market:** The secondary market is that market where investors buy and sell securities they already own.
- **Gilt account:** A "Gilt Account" means is essentially an account which is opened and maintained for holding Government securities, by an entity or a person including 'a person resident outside India' with a "Custodian" permitted by the Reserve Bank of India to open and maintain Constituent Subsidiary General Ledger Account.

- **Direct Access to Primary and Secondary market:** The step will provide retail investors with online access to the government securities market both primary and secondary directly through the Reserve Bank. The initiative has been named as Retail Direct.
- **Nullifies third party charges:** The provision of directly providing access to G-sec market to retail investors will eliminate the intermediaries which in turn will reduce third party charges.
  - It will broaden the investor base and provide retail investors with enhanced access to participate in the government securities market.

Way Forward:

- By providing retail investors direct access to primary and secondary markets, participation in G-secs market will increase and the government will have more and more funds for investment in infrastructure and energy sector.
- With this step, India has entered the league of nations comprised of USA and Brazil.

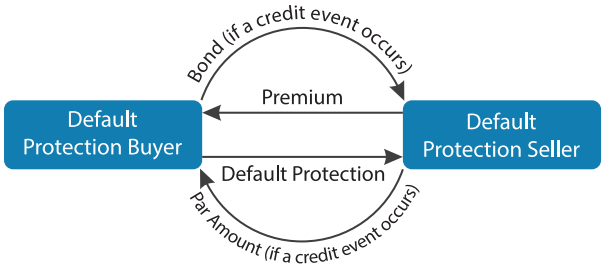
CREDIT DEFAULT SWAP

According to RBI's Draft guidelines on Credit Default Swaps (CDS), it plans to allow retail users undertake transactions in permitted credit derivatives for hedging their underlying credit risk.

About:

- **The RBI has come up with 'Reserve Bank of India (Credit Derivatives) Directions, 2021 –** Draft' as development of CDS market is sine qua non for the development of a liquid market for corporate bonds, especially for the bonds of lower rated issuers.
- Non-retail users shall be allowed to undertake transactions in credit derivatives for both hedging and other purposes.
- According to the draft Directions, Exchanges may offer standardised single-name CDS contracts with guaranteed cash settlement. Retail users shall undertake transactions in exchange-traded CDS only for hedging their underlying credit risk.

What is Credit Default Swap (CDS):



- **CDS is a derivative or contract** that allows an investor to swap or offset his credit risk with that of another investor.
- **Offloading of Risk:** If a lender is worried that a borrower is going to default on a loan, the lender could use a CDS to offset or swap that risk. To swap the risk of default, the lender buys a CDS from another investor who agrees to reimburse the lender in case the borrower defaults.
- **Exiting strategy:** Market participants can exit their CDS contract by unwinding the contract with the original counterparty or assigning the contract to any other eligible market participant.

User classification:

- A person resident in India and a non-resident — to the extent specified in the RBI directions – can participate in the market.
- Any user who is not eligible to be classified as a non-retail user will be classified as a retail user.
  - Non-retail users will include insurance companies, pension funds, mutual funds, alternate investment funds, foreign portfolio investors. These entities will also be eligible to act as protection seller in CDS.
  - Standalone primary dealers (SPDs) and non-banking finance companies (NBFCs), including housing finance companies (with minimum net owned funds of ₹500 crore) and resident companies (with minimum net worth of ₹500 crore), too, will be classified as non-retail users.

Restrictions on Credit Default Swap:

- The RBI said market-makers and users shall not enter into CDS transactions if the counterparty is a related party or where the reference entity is a related party to either of the contracting parties.
- Further, market-makers and users shall not buy/sell protection on reference entities if there are regulatory restrictions on assuming similar exposures in the cash market or in violation of any other regulatory restriction, as may be applicable.

FDI IN E-COMMERCE

Centre plans to issue a clarification on FDI policy for the e-commerce sector following complaints about malpractices.

About:

- **2018 Policy:** The Department of Industrial Policy & Promotion (DIPP) has published the FDI policy on e-commerce companies in 2018.
- **100% FDI under automatic** route is permitted in the marketplace model of e-commerce, while FDI is not permitted in the inventory-based model of e-commerce. Therefore, 100% FDI is permitted in B2B (Business to Business) e-commerce,

however, No FDI is permitted in B2C (Business to Consumer) e-commerce.

- The government had sought information from the online marketplaces as part of a probe into 'certain complaints from consumers and small retailers about certain practices of e-commerce companies',
- **Confederation of All India Traders (CAIT)** has repeatedly complained that online retailers are violating FDI rules for e-commerce.
- When B2C e-commerce is not allowed, these companies have circumvented the rules by setting up affiliates.
- Marketplaces have come up with new structures to sidestep the rules such as having their brands, third party manufacturing, curate more brands, and increase margins.

FDI rules in e-commerce:

- **Market-place model:** India allows 100 percent foreign direct investment (FDI) in the marketplace model of e-commerce, the marketplace model is defined as a technology platform that connects buyers and sellers.
- **Inventory-based models:** India has not allowed FDI in inventory-based models of e-commerce. The inventory model is where the goods and services are owned by an e-commerce firm that sells directly to retail customers.
- **Rule of 25%:** The inventory of a seller or vendor will be seen as being controlled by a marketplace if the vendor purchases more than 25 percent of its inventory from the marketplace or any of its group firms.

Prohibited activities:

- The rules now bar any entity in which an e-commerce firm or its group companies have a stake from selling on their online platform.
- It has also prohibited e-commerce firms from pushing merchants to sell any product exclusively on its platform. However, the sellers can choose to have a preferred online partner.
- The new rules also stipulate that an e-commerce marketplace, as well as any companies the marketplace has equity stakes in, should provide services such as fulfillment, logistics, and payments to all sellers on the platform in a fair manner.

Importance of the rules:

- The restriction is aimed largely at protecting India's vast unorganized retail sector that does not have the wealth to purchase at scale and offer big discounts.
- These measures were instituted to create a level-playing field and ensure that FDI-funded e-commerce entities functioned only as a marketplace.

Way Forward:

- E-commerce is supposed to provide a neutral platform so that buyers and sellers can trade with each other. The platform should not become a part of the trading transaction, or treat sellers discriminatorily. The platform should not seek to modify the free choice of the consumers.
- The government needs to plug the loopholes and enforce the rules strictly.

UNSOLICITED COMMERCIAL COMMUNICATIONS (UCC)

The Delhi High court decided on a plea which urged to curb unsolicited commercial communications (UCC).

About:

- A plea was filed in the high court alleging that the telecom service providers have been unable to prevent unsolicited commercial communications over their networks.
- This has resulted in millions of customers being defrauded by phishing activities over mobile networks.
- **As per TRAI regulation made in 2018,** the telecom service providers (TSPs) are required to verify purported telemarketers who are seeking registration (also known as registered telemarketers or RTMs) with them before granting access to customer data.
  - The Telecom Service Providers (TSPs) are also required to take immediate action against all fraudulent RTMs. However, TSPs have failed to perform this function effectively.
- **The direction of the High Court:**
  - The Delhi High Court directed the Telecommunication Regulatory Authority of India or TRAI to ensure 'complete and strict' implementation of the Telecom Commercial Communications Customer Preferences Regulations, issued by TRAI in 2018 for curbing UCC.
  - The high court also directed the telecom service providers (TSPs) to strictly comply with the above regulation and others.

Phishing

- Phishing is a type of cybercrime in which people are contacted by e-mail, phone calls, or text messages by someone fraudulently posing as a legitimate representative of an organization.
- In Phishing, a hacker attempts to obtain sensitive information or data, such as usernames, passwords, and credit card details, or other sensitive details.

Commercial Communication and Unsolicited commercial communication:

- Commercial communication is defined as any voice call or message using telecom services, where the primary purpose is to inform, advertise, or solicit business for, (a) goods or services, (b) a supplier or prospective supplier of goods or services, (c) business or investment opportunities, or (d) a provider or prospective provider of such opportunities.
- Unsolicited Commercial Communication(UCC) is defined as commercial communication that is not in accordance with the consent or the registered preferences of telecom subscribers. UCC refers to any Commercial Communication which a subscriber opts not to receive. However, it does not include any transactional message or any message transmitted on the directions of the Central Government or State Government, or agencies authorized by any government.

Telecom Commercial Communications Customer Preferences Regulations (TCCCPR) 2018

The regulations provide for the following:

- Registration of senders such as businesses and telemarketers
- Using headers intelligently to segregate different types of messages, the subscriber with complete control over their consent and the ability to revoke the consent already granted, at their option
- The concept of registered templates for both SMS and voice communication has been introduced to prevent deliberate mixing of promotional messages into the transactional stream.

The salient features of the regulation are:

- It provides for a wide range of customer preferences which would be implemented in near real time using Distributed Ledger Technology (DLT) and make communications traceable and capable of being controlled effectively.
- Co-regulation where Telecom Service Providers/ Access Providers establish and arrange the framework, which is legally backed by regulation.
- It provide for the use of cloud-based solutions for handling of complaints, the registration of headers and preferences, and use of smart contracts for automated allocation of roles between entities in the commercial communication ecosystem.
- Enhanced controls and new options for all entities to perform their functions and to carry on their businesses efficiently.

NATIONAL COAL INDEX (NCI)

National Coal Index (NCI) was conceptualized to arrive at the revenue share based on market prices of coal.

About:

- **The National coal index is a price index** that reflects the change of price level of coal on a particular month relative to the fixed base year. The base year for the NCI is FY 2017-18. It is designed to correctly reflect the market price of coal.
- Prices of coal from all the sales channels of coal, including import, as existing today are taken into account for compiling the National coal index. The amount of revenue shares per tonne of coal produced from auctioned blocks would be arrived at using the National coal index using a defined formula.
- **Five Sub-indices:** The National coal index is composed of a set of five sub-indices:
  - Three for Non-Coking Coal and two for Coking Coal.
  - As per the grade of coal of a mine, the appropriate sub-index is used to arrive at the revenue share.

Coal in India

- India has the world's fifth-largest reserve of coal.
- **India is the second-largest producer of coal** after China. (Top five producers are: China, India, the USA, Australia, Indonesia). India was also the world's **second-largest importer and consumer** of coal in 2019,
- **Coking coal:** Coking coal, also known as metallurgical coal, is **used to create coke**, one of the key irreplaceable inputs for the production of steel.
- **Coke is produced by baking coal** in the absence of oxygen to remove the volatile hydrocarbons contained in coal. The resulting coke is mechanically strong, porous, and chemically reactive, which are all critical properties for stable blast furnace operation.
- **Non Coking Coal:** This is the coal without coking properties. It is also called steam coal or thermal coal and is used in thermal power plants to generate electricity. It can be used in cement, fertilizer and other heating purposes.

Coal Mines in India

- **Nationalisation of coal mines:** The Coking Coal Mines (Nationalization) Act, 1972 and the Coal Mines (Nationalization) Act, 1973 provided for government take-over of all coal mines in India.
- **Denationalisation:** Both of the above acts were repealed by the Repealing and Amending (Second) Act, 2017. The parliament enacted the Coal Mines (Special Provisions) Act, 2015 which enables the government to allocate coal mines through auctions.

NEXT IAS

2 INTERNATIONAL RELATIONS

INDIA-POLAND RELATIONS

Poland has invited Indian Prime Minister during his visit to Portugal and United Kingdom.

About:

- Indian Prime Minister will be visiting Portugal for the European Union-India summit (May 2021), and Cornwall, United Kingdom to attend the G7 grouping where India is a special invitee (June 2021).
- Poland is also negotiating with India for a travel bubble arrangement to resume direct flights suspended due to Covid-19 pandemic.
  - Creating a travel bubble involves reconnecting countries or states which have shown a good level of success in containing the Covid-19 pandemic domestically.
  - Such a bubble would allow the members of the group to restart trade ties with each other and open travel and tourism.

India Poland Relations in Detail:

Political Relations:

- **India and Poland share a long-standing friendly relationship**, marked by high level political contacts, vibrant economic engagement and traditional cultural links.
- **Diplomatic relations were established in 1954**, leading to the opening of the Indian Embassy in Warsaw in 1957.
- **Both countries shared common ideological perceptions,** based on their opposition to colonialism, imperialism and racism.
- A number of bilateral agreements are operational, recent ones include:
  - Agreement on Exemption from Visa Requirement for Holders of Diplomatic Passports (2015);
  - Agreement on Cooperation in Agriculture and Allied Sectors (2017); and
  - Cooperation in the Area of Coal Mining (2019).

Economic & commercial Relations

- **Poland is India's largest trade partner and export destination in the Central European region**, with bilateral trade growing almost seven-fold over the last ten years.
- As per Indian statistics, the overall value of bilateral trade in 2019 was US$ 2.36 billion.
- India's export to Poland contributed to 0.48% of overall India's export. Only 0.15% of India's import was covered by Poland in 2019.
- **Investment:** Indian investments in Poland are valued at over **US$3 billion.** Total Polish investment in India is estimated at **US$ 672 million.**
- **Sectoral Collaboration**
  - **Agro and Food processing sectors:** Poland possesses world class food processing including preservation/storage technologies while India is one of the largest producers for many fruits, dairy and Agro products.
  - **IT/ICTSector:** Around thirteen Indian IT companies, employing more than 10,000 professionals, are currently active in Poland and are operating also their Europe operation from here.
  - **Textile Sector:** India has presently a share of only 3.73% overall in the Polish Textile and Apparel Imports (valued at US$ 400 million).
  - **Mining/energy sector**, Poland possesses reputed clean coal technologies and Polish public sector companies have played a substantial role in development of mining and power sectors in India. India and Poland signed a Memorandum of Understanding on 4 February 2019, in New Delhi to enhance bilateral cooperation in the coal and mining sector.
  - **Pharmaceutical and chemicals Sector** – Given Poland's strategic location, shortages in healthcare personnel and 25% growth in pharma market in last 5 years, there are good opportunities for Indian exporters and investors.

Cultural and Educational Relations

- **There is a strong tradition of Indology studies** in Poland, with Polish scholars having translated Sanskrit into Polish as early as in the 19th Century.

- **An MoU for establishment of an ICCR chair of Indian studies** at the Jagiellonian University, Krakow for the period 2017-18 to 2019-2020 was signed in February 2017 and Professor Rohit Wanchoo has joined the University.
- **Yoga:** The first International Day of Yoga was organized in 21 cities in Poland on June 21, 2015. An estimated 11000 people participated in public events. The flagship event was held in the capital city Warsaw.

INDIA AFGHANISTAN RELATIONS

Recently, the US has urged India to get involved in the internal politics and related peace process in Afghanistan.

About:

- The US has described India as a major actor in the region with an important role in ensuring Afghanistan's peace and development.
- The US wants India to continue playing a constructive role in bringing peace internally.
- This would be the first time India has acknowledged that it should be part of the larger peace process inside Afghanistan.
- India has been hesitating in being part of a peace process which includes the Taliban as well as Pakistan in key roles.
- At this point, India has more influence with the Ghani government than almost any other country, comparable with the US.

Afghan Peace Process:

- The Afghan peace process comprises the proposals and negotiations in a bid to end the ongoing war and conflict involving the Taliban in Afghanistan.
- Negotiations and the peace movement intensified in 2018 amid talks between the Taliban and the US.
- It is expected that a mutual agreement between the Taliban and the United States would be followed by a phased American withdrawal and the start of intra-Afghan peace talks.
- Besides the United States, regional powers such as Pakistan, China and Russia, as well as **NATO** play a part in facilitating the peace process.

Challenges:

- **Security:** India has been the victim of state-sponsored terrorism emanating from Pakistan supported terrorist group operating in the Afghanistan region (e,g. Haqqani network). Thus, India has two priorities in Afghanistan:
  - to prevent Pakistan from setting up a friendly government in Afghanistan, and
  - to avoid the return of jihadi groups, like al Qaeda, which could strike in India.
- **Developmental Projects:** The quantum of assistance should not go down, but projects must be selected with the ground situation in mind.
  - Many believe that with Taliban gaining ground, India must be much more careful and choose smaller projects with care.
- **Economic:** Afghanistan is a gateway to the oil and mineral-rich Central Asian republics.
  - Afghanistan's main advantage is its geography, as anyone who is in power in Afghanistan controls the land routes connecting India with Central Asia.
- India's growing friendship with Afghanistan has always been a major worry for Pakistan.

Importance of Afghanistan for India:

- Afghanistan serves India's security and economic interests as it will help to counter the Pakistani influence in the region.
- India needs Afghanistan for accessing the landlocked Central Asian countries that border Afghanistan.
- Afghanistan is home to resource deposits worth one trillion dollars, according to the US Geological Survey.
- The pipeline project TAPI (Turkmenistan-Afghanistan-Pakistan-India), which seeks to connect an energy-rich Central to South Asia, will be possible only if there is peace in Afghanistan.

India's Role in Afghanistan:

- India's vision of a sovereign, united, stable, plural and democratic Afghanistan is one that is shared by a large constituency in Afghanistan, cutting across ethnic and provincial lines.
- It is necessary for Indian to assist Afghanistan in building sound political structures, a strong military and economy, along with human resources.
- India needs to enhance its current assistance to Afghanistan given the growing security challenges and economic difficulties.
- India needs to take a tough decision to address the growing threat in Afghanistan while keeping in mind its own strategic interests.

Way Forward:

- Supporting the Afghan stand, India has been asserting that the peace process must be Afghan-led, Afghan-owned and Afghan-controlled.
- A more active engagement will enable India to work with like-minded forces in the region to ensure that the vacuum created by the U.S. withdrawal does not lead to an unravelling of the gains registered during the last two decades.

■■■■

3 INTERNAL SECURITY

CCTNS HACKATHON

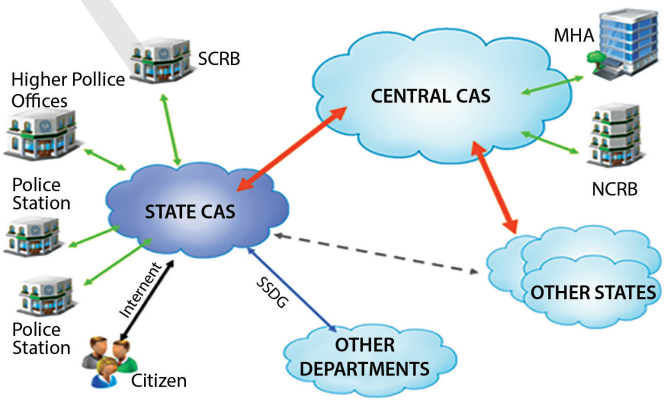
2nd CCTNS Hackathon and Cyber Challenge 2020-21 of the National Crime Records Bureau (NCRB) was inaugurated in New Delhi.

About: 2nd CCTNS Hackathon and Cyber Challenge

- This hackathon is in continuation to the Hackathon & Cyber Challenge which concluded in March 2020.
- Police officials especially those from the cutting edge level, academia, industry, students, and others are being invited to participate in the event to help improve existing IT applications
- **Mobile App:** "Locate Nearest Police Station" was also launched at the function.
- This will add to other Central Citizen Services being provided by the NCRB such as "Missing Person Search", "Generate Vehicle NOC", proclaimed Offenders Information" and various other services being provided by the State Citizen Police Portals.

Crime and Criminal Tracking Networks and Systems:

- The Crime and Criminal Tracking Networks and Systems, abbreviated to **CCTNS**, is a project under the Indian government for creating a comprehensive and integrated system for effective policing through e-Governance.
- An allocation of Rs. 2000 crores were made for CCTNS Project. Cabinet Committee on Economic Affairs (CCEA) approved the project in 2009.
- The system includes a nationwide online tracking system by integrating more than 14,000 police stations across the country.



- The project is implemented by National Crime Records Bureau.
- CCTNS is a Mission Mode Project under the National e-Governance Plan (NeGP) of Govt. of India.

Significance:

- Make the Police functioning citizen friendly and more transparent by automating the functioning of Police Stations.
- Improve delivery of citizen-centric services through effective usage of ICT.
- Provide the Investigating Officers of the Civil Police with tools, technology, and information to facilitate the investigation of crime.

NATIONAL CRIME RECORDS BUREAU

- The National Crime Records Bureau is an Indian government agency responsible for collecting and analyzing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL).
- NCRB is headquartered in New Delhi and is part of the Ministry of Home Affairs (MHA), Government of India.
- NCRB was set-up in 1986 to function as a repository of information on crime and criminals to assist the investigators in linking crime to the perpetrators.

BHIMA KOREGAON CASE WITH NATIONAL INVESTIGATION AGENCY

A digital forensic analyst firm has claimed that the digital evidence provided by the National Investing Agency (NIA) against the Bhima-Koregaon accused are not genuine.

About:

- It is being said that the key evidence against Rona Wilson, an accused in the Bhima Koregaon case that is being investigated by the NIA, was planted on a laptop seized by police, a report by Arsenal Consulting, a Massachusetts-based digital forensics firm, has claimed.
- The National Investigation Agency has been investing in the Bhima-Koregaon case.
- The case relates to the incidence of violence which erupted during an annual gathering in 2018 at Bhima Koregaon. The gathering was celebrating the 200th anniversary of the Battle of Bhima Koregaon.

NEXT IAS

About the Battle of Bhima-Koregaon:

- The battle was fought in 1818, as part of the Third Anglo-Maratha war.
- In the battle, the army of East India Company defeated the Maratha confederacy force led by the Peshwa Baji Rao II.
- The company-led army composed mainly of people from the Mahar community, who were considered untouchables.
- The defeat of the Peshwa army was considered to be a victory against caste-based discrimination and oppression.

About the NIA:

- The National Investigation Agency is an agency of the Ministry of Home Affairs which deals with Counter-terrorism operations.
- It was established through the NIA Act, 2008 after the 26/11 Mumbai Attack.
- **Jurisdiction:** NIA has concurrent jurisdiction which empowers the Central Agency to probe terror attacks in any part of the country, covering offences, including challenges to the country's sovereignty and integrity, bomb blasts, hijacking of aircraft and ships, attacks on nuclear installations.
- NIA is empowered to conduct investigation and prosecution of offences which are specified in the Schedule of the NIA Act, 2008.
- **Personnel:** The ground staff of the agency in the national capital could be drawn from existing central staff and security organisations while in the states, the permanent deputation from the state police could be taken.
- **Special NIA Courts:** Special courts have been notified by the Central Government of India for speedy trial of the cases
  - Any question as to the jurisdiction of these courts is decided by the Central Government.
  - The special courts are presided over by a judge appointed by the Central Government on the recommendation of the Chief Justice of the High Court with jurisdiction in that region.
  - The Supreme Court of India has also been empowered to transfer the cases from one special court to any other special court within or outside the state in the interest of justice.
  - The NIA Special Courts are empowered with all powers of the court of sessions under the Code of Criminal Procedure, 1973 for the trial of any offences
  - The appeal from these courts lies before the division bench of the High court.

The NIA (Amendment) Bill 2019:

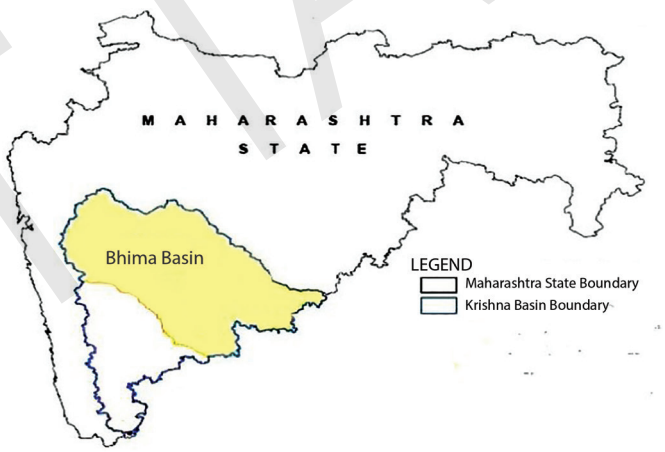
- The bill empowers the NIA to probe terror attacks targeting Indians and Indian interests abroad. For example, NIA would be able to investigate the Sri Lanka Easter Bombings and Kabul Gurudwara bombing.
- The amended legislation empowers the anti-terror agency to investigate scheduled offences such as human trafficking; circulation of fake currency; manufacture and sale of prohibited arms; and cyber-terrorism.

Controversy:

- Several states have argued that the subject of law and order is a state subject in the seventh schedule of the constitution.
- In 2020 Chhatisgarh state has filed a case against the act in the supreme court challenging the constitutionality of the act.

Way Forward:

What is the need of the hour is to have a fresh look into the case by judiciary considering the bails being rejected of the accused, various political parties coming in support of the accused and forensics firms' report on fake claims.



K9 VAJRA-T

Private defence manufacturer L&T has developed hundred K9 Vajra howitzer for the Indian Army.

About:

- K-9 Vajra-T is tracked self-propelled howitzer.
- Howitzer is a short gun for firing shells on high trajectories at low velocities.
- K-9 Vajra-T is a upgraded variant of K-9 Thunder which was developed and used by the army of South Korea.
- It offers a high rate of fire at long-range and is compatible with Indian and standard North Atlantic Treaty Organisation (NATO) ammunition.
- The K9 Thunder platform is made of all-welded steel armour protection material.

About the procedure:

- K-9 Vajra-T has been produced in L&T's Armoured Systems Complex (ASC) at Hazira, Gujarat.
- L&T had won the contract to supply 100 units of K9 Vajra under the 'Make in India' initiative in a global competitive bidding.
- L&T had signed a transfer of technology contract with South Korean company, Hanwha Corporation.
- The K9 gun has been developed under the 'Buy Global' programme of the Defence Procurement Procedure (DPP).

Significance:

- Howitzer is lighter in weight compared to battle tanks and hence these can be operated more easily in mountainous terrains. This is important in the backdrop of tension in Line of Actual Control in Ladakh.
- Indigenous manufacturing would boost domestic economy and generate employment.

ARJUN TANK MK-1A

DRDO has developed Battle tank Arjun Mk-1A for Indian Army.

About:

- The state-of-the-art third-generation main battle tank has been indigenously designed and developed by Combat Vehicles Research & Development Establishment (CVRDE) based in Chennai.
  - CVRDE is part of the Defence Research & Development Organisation (DRDO).
- Arjun MBTs are manufactured by The Heavy Vehicles Factory (HVF) based in Chennai. It was founded by the Ordnance Factory Board.
- The Arjun Main Battle Tank project was initiated by DRDO in 1972. The objective was to create a "state-of-the-art tank with superior fire power, high mobility, and excellent protection"

Special Characteristics:

- **Weight:** The tank is amongst the world's heaviest, its cross-country mobility was restricted by the sizeable nominal ground pressure (NGP) it exerts. Hence, Arjun would be deployed mainly in Rajasthan's desert region. Due to its weight, it would not be feasible to position it in Punjab or adjoining areas.
- **Upgradation:** The Mk-1A incorporates 72 improvements, including 14 major ones, over the previous Mk1 model. Upgradations include
  - Advanced thermal imaging sights for night fighting,
  - Improved navigation systems,
  - Digital control harness
  - a Mine plough.
  - Panoramic sight for the tank commander,
  - Auxiliary power unit (8.5KW capacity)
  - Enhanced communication system for real time data-transmission.
- **Other characteristics:**
  - **Armour:** Fin Stabilised Armour Piercing Discarding Sabot (FSAPDS)' ammunition and 120-mm calibre rifled gun.
  - **Fire control system:** A computer-controlled integrated fire control system with stabilised sighting that works in all lighting conditions.
  - **Kanchan armour:** It is covered with Kanchan armour, the composite armour has been indigenously developed by the Defence Metallurgical Research Laboratory (DMRL), it is a research laboratory of the Defence Research and Development Organisation (DRDO). DMRL is located at kanchanbagh, Hyderabad.

Significance:

- Before developing Arjun battle tanks, India used Russian made T-series of tanks. Indigenisation of defence production provides strategic autonomy.
- Indigenous manufacturing would boost domestic economy and generate employment
- As per report of SIPRI (Stockholm International Peace Research Institute), India was world's largest arm importer in the period between 1990 to 2019. Indigenous manufacturing of weapons would lower our defence import bill and save foreign currency
- Development of new technologies would boost research and development activities.

DRDO

- Defence Research and Development Organisation is an agency under the Department of Defence Research and Development in Ministry of Defence
- DRDO has a network of 52 laboratories, which are engaged in developing defence technologies covering various fields, like aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems,
- DRDO is India's largest and most diverse research organisation.
- The organisation includes around 5,000 scientists belonging to the Defence Research & Development Service (DRDS) and about 25,000 other scientific, technical and supporting personnel

4 POLITY & GOVERNANCE

DNA TECHNOLOGY (USE AND APPLICATION) REGULATION BILL 2019

The parliamentary committee on science and technology has submitted its report on the DNA Technology (Use and Application) Regulation bill 2019.

About:

- The Centre had introduced DNA Technology (Use and Application) Regulation Bill in 2019.
- It aimed to enable the agencies to use DNA technology while probing crime cases and set up a data bank of DNA.
- It was referred to the Parliamentary Standing Committee for thorough analysis.
  - As there were apprehensions that the bill could be misused to target segments of society based on religion, caste or political views.

DNA Technology (Use and Application) Regulation Bill 2019:

- The Bill provides for the regulation of use of DNA technology for establishing the identity of certain persons.
  - It aims to establish a database of "certain category of persons" such as victims of crimes, missing persons and children, unidentified bodies, as well as offenders, suspects and undertrials in cases.
- It seeks to create a regulatory framework for obtaining, storing and testing of DNA samples of human beings, mainly for the purposes of criminal investigations.
- DNA testing is already being used for a variety of purposes, such as criminal investigations, establishment of parentage, and search for missing people.
  - The proposed law seeks to bring in a supervisory structure to oversee these practices, and frame guidelines and rules so that the DNA technology is not misused.

Major Provisions of the Bill:

- **National level DNA regulatory board and a DNA data bank** - The bill proposes to set up these two institutional structures at the national level.
  - **Regional centres** of the board as well as the data bank can also be set up at the state level as well.
- **The DNA regulatory board,** which is proposed to be the main regulatory authority, would frame the rules and guidelines for DNA collection, testing and storage.
- **The Data bank** would be the repository of all DNA samples collected from various people under specified rules.
- **Testing at authorised labs:** The Bill proposes that testing of DNA samples can be carried out only at laboratories that are authorised to do so by the regulatory board.
- It also specifies the circumstances under which a person can be asked to submit DNA samples, the purposes for which such requests can be made, and the exact procedure for handling, storing and accessing these samples.
  - DNA samples can be collected from the objects found at the crime scene, or from the body of the accused or volunteer.
  - Police can ask for DNA samples of the person accused of an offence to facilitate their investigation.
- **Written consent unless serious crime:** However, the DNA sample can be obtained only on the written consent of the accused unless the offence punishable by **death or by imprisonment for at least seven years.**
  - DNA can also be obtained without consent if an authorised magistrate is satisfied that a DNA test is absolutely necessary for investigation of the crime.
  - People who are witness to a crime, or want to locate their missing relatives, or in similar other circumstances, can volunteer to give their DNA samples, again through written consent.
- **Some safety measures**
  - Removal of DNA profiles
    - People whose DNA samples have been collected, either from the crime scene, or through voluntary written consent, can request the removal of their information.
    - DNA samples of people who are not suspects or undertrials cannot be matched with already stored information of offenders.
  - **Offences -** It specifies penalties for various offences like disclosure of DNA information using DNA sample without authorization.
  - It provides provisions of imprisonment of up to three years and fine of up to one lakh rupees.

Concerns associated with the Bill:

- The main debate revolves around three issues
  - whether the DNA technology is foolproof
  - whether the provisions adequately address the possibility of abuse of DNA information
  - whether the privacy of the individual is protected
- DNA information can be extremely revelatory.

NEXT IAS

- **Biological Surveillance:** There is apprehension, therefore, that the DNA repository proposed by the Bill could end up bundling information of people who have nothing to do with the crime being investigated.
  - Thus, it may allow state-sanctioned biological surveillance.
  - It can not only establish a person's identity but also reveal a lot about physical and biological attributes of the person like eye, hair or skin colour, susceptibility to diseases, possible medical history, and possible clues to biological relatives.
- **Privacy:** Collecting and storing such intrusive information could lead to abuse, besides being violative of a person's privacy.
- **Caste Profiling:** It may be used for caste profiling and may lead to targeted discrimination of specific groups such as marginalised communities, including Dalits, Adivasis and religious and gender minorities.
- **Inadequate Supporting Infrastructure:** The committee has also flagged the concerns over the lack of infrastructure for conducting DNA tests in the country.
  - Presently, the labs in the country can fulfill only 2-3% of the country's DNA profiling requirement.
  - In Rajiv Singh v. State of Bihar (2011), the Supreme Court had dismissed improperly analyzed DNA evidence.

Parliamentary Committee's Recommendations:

- The Committee has recognised the importance of DNA technology in cracking crime cases but wants the Centre to allay the fears over its misuse.
- It has flagged risks in having a national data bank of crime scene DNA profiles.
  - This data bank may include virtually everyone since DNA is left at the 'crime scene' before and after the crime by several persons who may have nothing to do with the crime being investigated.
- It has recommended that DNA regulatory board should be independent and "not comprise wholly of serving government officials.
- It strongly recommends only one National Data Bank rather than various regional databanks to minimise chances of misuse of data.
- It recommends that DNA samples be taken only with the consent of an individual and no person be "forced to provide evidence that may incriminate him/her in any crime".
- It has said that an enabling ecosystem must be created soon to ensure DNA profiling is done in a manner that is fully consistent with the letter and spirit of various Supreme Court judgments and with the Constitution.

Way Forward:

- The proposed legislation will empower the criminal justice delivery system by enabling the application of DNA evidence, which is considered the gold standard in crime investigations.
- Such a data base would help trace repeat offenders of heinous crimes such as rape and murder through DNA profiling.
- The government is bestowed with the responsibility of protecting the citizens' privacy. The easiest way to achieve this would be prior adoption of a privacy or Data protection bill, 2019.
- DNA tests are already happening and are frequently used as the most reliable tool to establish identity.
  - It would be better to have regulatory safeguards so that it is carried out only in prescribed manner and by authorised personnel and institutions.
- Nearly 60 countries have enacted similar legislation, and thus India should follow the suit ensuring that all important matters related to privacy, confidentiality and data protection have been taken into account.

COMMISSION FOR SUB-CATEGORISATION OF OBCs

The Centre has extended the tenure of the Commission to Examine Sub-categorisation of Other Backward Classes (OBCs)

About:

- The commission is headed by Justice G Rohini, former Chief Justice of Delhi High Court.
- The Rohini Commission was constituted in October 2017 under Article 340 of the Constitution. At that time, it was given 12 weeks to submit its report, but has been given several extensions since, the latest one being the 10th.
- **Article 340** deals with the appointment of a commission to investigate the conditions of backward classes.
- **Also in Jarnail Singh vs Lachmi Narayan Gupta,2018 Case,** Constitution Bench of the Supreme Court has reopened the legal debate on sub-categorization of Scheduled Castes and Scheduled Tribes for reservations.
- **The idea Sub-categorisation:** Communities such as the scheduled caste, the scheduled tribe, and the other backward classes are provided with reservation of post in educational institutions or jobs. It has been noted that among all the communities, categorizes as SC, ST, or OBC, few groups belonged to the deprived community have benefitted disproportionately from the affirmative action compared to other groups within the community.
- Sub-categorisation, aka 'quota within quota', refers to creating categories within a deprived section (for example, the OBCs) for reservation. This would ensure "equitable distribution" of representation among all OBC communities.

- **The Rohini Commission:** It was established in 2017, under article 340 of the constitution of India, to make recommendations on the issue of sub-categorisation of Other Backward Classes (OBCs)

Terms of reference of the Rohini commission:

- To examine the extent of inequitable distribution of benefits of reservation among the castes or communities included in the broad category of OBCs regarding such classes included in the Central List;
- To work out the mechanism, criteria, norms, and parameters in a scientific approach for sub-categorisation within such OBCs;
- To take up the exercise of identifying the respective castes or communities or sub-castes or synonyms in the Central List of OBCs and classifying them into their respective sub-categories.
- A new term of reference was added in January 2020 which reads as,
- To study the various entries in the Central List of OBCs and recommend correction of any repetitions, ambiguities, inconsistencies, and errors of spelling or transcription.

Findings made by the Commission:

- **Overall Jobs and education:**
  - The Commission analysed the data of 1.3 lakh central jobs given under OBC quota over the preceding five years and OBC admissions to central higher education institutions, including universities, IITs, NITs, IIMs, and AIIMS, over the preceding three years.
  - 97% of all jobs and educational seats have gone to just 25% of all sub-castes classified as OBCs;
  - 24.95% of these jobs and seats have gone to just 10 OBC communities.
- **The unsuitability of OBS:** Several posts reserved for OBCs were being filled by people of general category as OBC candidates were declared "NFS" (None Found Suitable).

Recommendations of the commission:

- It is learned that the commission has drawn up a proposal to divide the total 2,633 OBC castes in the Central List into four subcategories. The OBCs are entitled to 27% of the quota. The commission proposes to split 27% of the OBC quota reservation into 2,6,9 and 10 percent for the four categories.
- Category 1 will include 1,674 caste groups, largely those who have not benefited from the quota.
- Category 2 will have 534 caste groups while categories 3 and 4 will consist of 328 and 97 caste groups, respectively.
- Category 4 contains the least number of caste groups, but most of these communities are considered as a dominant group with a large population.

Challenges before the commission:

- **Inadequate data:** There is a deficiency of data for the population of various communities to compare with their representation in jobs and admissions.
- **Collection of Data:** It was decided that data of OBCs will be collected during the census in 2021, but no consensus has been reached regarding the enumeration of OBCs in the Census.

Do You Know?

- **The Kalelkar Commission,** set up in 1953, was the first to identify backward classes other than the Scheduled Castes (SCs) and Scheduled Tribes (STs) at the national level.
- **The Mandal Commission Report, 1980** estimated the OBC population at 52% and classified 1,257 communities as backward.
  - It recommended increasing the existing quotas, which were only for SC/ST, from 22.5% to 49.5% to include the OBCs.
- **The central government reserved 27% of seats in union civil posts and services for OBCs** [Article 16(4)]. The quotas were subsequently enforced in central government educational institutions [Article 15 (4)].
  - In 2008, the Supreme Court directed the central government to exclude the creamy layer (advanced sections) among the OBCs.
- **The 102nd Constitution Amendment Act, 2018** provided constitutional status to the National Commission for Backward Classes (NCBC), which was previously a statutory body under the Ministry of Social Justice and Empowerment.

NEW NODAL AGENCY TO TACKLE FRAUD, PESKY SMS & CALLS

The government has proposed to form a digital intelligence unit (DIU) and Telecom Analytics for Fraud Management and Consumer Protection (TAFCOP).

About:

- The central government will set up a digital intelligence unit (DIU) as a nodal agency to deal with complaints of unsolicited commercial communication (UCC) and cases of financial fraud.
- Apart from the DIU, a Telecom Analytics for Fraud Management and Consumer Protection (TAFCOP) will also be set up at all the 22 license service area levels.

- **Background:** Recently, the Delhi High Court (HC) ordered the Telecom Regulatory Authority of India (TRAI) to ensure "complete and strict" implementation of the regulation issued by it in 2018 for curbing Unsolicited Commercial Communications (UCC).
- In 2020 TRAI had imposed fines of up to Rs 30 crore on telecom companies such as Bharat Sanchar Nigam Limited, Vodafone Idea and Reliance Jio Infocomm for not putting enough measures to control UCC.
- The issue of UCC has been a major area of concern for the Telecom Ministry as well as the Telecom Regulatory Authority of India (TRAI). It has from time to time fined telecom operators for not following its directives on stopping UCC.

Digital Intelligence Unit (DIU):

- It will deal with complaints of unsolicited commercial communication (UCC) and cases of financial Fraud related to the digital payments space.
- The main function of DIU will be to coordinate with various LEAs (law enforcement agencies), financial institutions and telecom service providers in investigating any fraudulent activity involving telecom resources.

Telecom Analytics for Fraud Management and Consumer Protection (TAFCOP) System:

- These systems will be created at all the 22 license service area level.
- These systems will also be liable for protection of consumers from digital fraud cases in respective license service areas.

Significance:

- **Checking financial frauds:** Fraudulent calls which are made by tele-callers of unregistered financial institutions often lead to duping of consumers by fraud financial transactions. These financial institutions will help to evade these frauds.
- **Strengthen Trust:** The DIU system will strengthen the trust of people in the digital ecosystem and will make financial digital transactions primarily through mobile more secure.
- **Checking Violation of right to choose:** Even the subscribers registered in Do-Not Disturb (DND) service continue to receive commercial communication from Registered Tele-Marketers (RTMs) and Unregistered Tele-Marketers (UTMs). This leads to breach of fundamental right of right to choose under right to life (Article 21).

Way Forward:

- Amid rising level financial frauds across the country it has become evident for the government to take steps to strengthen the trust of people in the digital ecosystem and financial digital transactions.

Telecom Regulatory Authority of India

- **It is a Statutory Body:** Established by an Act of Parliament (Telecom Regulatory Authority of India Act, 1997).
- **Objectives:** To regulate telecom services, including fixation/revision of tariffs for telecom services.
- Provide a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.

State of financial fraud in India

- According to RBI annual report 2019-2020, bank frauds have been recorded more than double in the country with over Rs 71,500 crore in the previous fiscal. This worth around Rs 1.85 lakh crore.
- **Increase in high value frauds:** There was a concentration of large value frauds, with the top 50 credit-related frauds constituting 76% of the total amount reported as frauds during 2019-20.
- **Frauds in public sector and private sector banks:** Public sector banks witnessed a 234% year-on-year rise in fraud cases which accounted for 80% of the total such reported instances.
- Private Banks reported a more than 500% risen in financial cases and formed over 18% of the total fraud cases.
- **Reasons listed for rise in financial frauds:** The report has listed different reasons for financial frauds in the country. These are:
  - Weak implementation of EWS (early warning signals) by banks.
  - Non-detection of EWS during internal audits.
  - Non-cooperation of borrowers during forensic audits.
  - Inconclusive audit reports and lack of decision making in joint lenders.

LOKPAL

The Centre has refused to disclose the minutes of the Lokpal selection committee's meetings.

About:

- The centre's refusal to disclose the minutes of the Lokpal selection committee meeting has been upheld by the Central Information Commission (CIC) citing two Supreme Court cases related to a Lokpal search committee and the committees for selecting Information Commissioners.
- The Department of Personnel and Training argued that "the confidentiality of the said record can be gauged by the fact that the averred minutes of the Selection Committee were received in a sealed cover."

- It invoked the exemption clause in Section 8(1) (e) of the RTI Act, claiming that the documents authored by third parties under reference are held in a fiduciary capacity by the Department of Personnel and Training.
- Right to Information (RTI) activists intend to appeal against the CIC's order in court, pointing out the irony that the Lokpal itself is a body meant to augment transparency in governance.
- The activist pointed out that there has been no prior judgment that the recommendations of public officials are fiduciary in nature.
- It is argued that the larger public has a right to know about the basis on which their Lokpal or Lokayukta was selected.

About Lokpal:

- The Lokpal was set up in 2013 as an anti-corruption authority which had jurisdiction over the Central government to inquire into allegations of corruption against public functionaries.
- Since its legal inception in 2013, no members were appointed for the next five years.

Lokpal Act, 2013

Lokpal Act, 2013 has following provisions:

- **Creation of office of Lokpal:** The bill creates a Lokpal at the centre which shall consist of a chairperson and up to eight members.
- **Composition of Lokpal:** The Lokpal must consist half of the total members having higher judicial experience and the other half should have experience in public administration, finance, insurance and banking laws, anti corruption and vigilance.
- The act provides that half the members of Lokpal shall be from amongst scheduled castes, scheduled tribes, other backward castes, minority communities and women.
- **Selection procedure of Lokpal:** The Act provides for selection process of Lokpal.
- It provides that the chairman and members of Lokpal shall be appointed by a selection committee consisting of the
  - Prime Minister,
  - The Speaker of Lok Sabha,
  - The Leader of Opposition in Lok Sabha,
  - The Chief Justice of India or a sitting supreme court judge as nominated by the CJI and
  - An eminent jurist to be nominated by the President based on the recommendations of the other members of the selection committee.
- **Powers of Lokpal:** The Bill specifies that the office of Lokpal shall investigate and prosecute cases of corruption.
- **Extent of jurisdiction:** The jurisdiction of Lokpal extends to the Prime Minister, Ministers, current and former Members of Parliament and Members of Legislative Assemblies, government employees and employees of companies funded or controlled by the central or state government.
- It shall also have jurisdiction over institutions receiving foreign donations in excess of ten lakh rupees per year or such higher limit as specified.
- **Exception from jurisdiction:** It excludes any allegation of corruption against a Member of Parliament in respect of anything said or a vote given in Parliament, from the jurisdiction of Lokpal.
- **Time frame of inquiry:** The Act specifies a time limit of 60 days for completion of inquiry and 6 months for completion of investigation by the Central Bureau of Investigation.
- This period of 6 months can be extended by the Lokpal on a written request from CBI.
- **Special provisions for enquiry against Prime Minister:** It specifies that any inquiry against the Prime Minister has to be held in-camera and approved by two third of the full bench of the Lokpal.
- **Superintendence over CBI:** The act gives Lokpal the power of superintendence over CBI with respect to cases referred by it to CBI.
- It also specifies that CBI officers investigating cases referred by the Lokpal can only be transferred with the approval of the Lokpal.
- It proposes establishment of a Directorate of prosecution within CBI.
- **Funding:** All expenses of Lokpal shall be charged to the Consolidated Fund of India.
- **Punishment:** The legislation provides an imprisonment of up to seven years for public servants on grounds of corruption.
- Criminal misconduct and habitually abetting corruption has a higher penalty and would result in imprisonment up to ten years.
- Making false and frivolous complaints to Lokpal would result in a fine of up to one lakh rupees and imprisonment of up to one year.
- **Punishment for false complaints:** A person who is convicted for having made a false complaint shall be liable to compensate the public servant against whom the false complaint was made.

Limitations of the Provision of non-disclosure

- **Lack of transparency:** The selection of Lokpal which is the highest ombudsman of the country must transparent to the public. This will provide infuse trust of public in the process of governance.
- **Lokpal is not free from political influence** as the appointing committee itself consists of members from political parties.
- **The 2013 Act did not provide concrete immunity to the whistleblowers.** The provision for initiation of inquiry against the complainant if the accused is found innocent will only discourage people from complaining.
- **Exclusion of judiciary** from the ambit of the Lokpal.
- **Lokpal is not given any constitutional backing** and there is no adequate provision for appeal against the Lokpal.
- **Right to be informed:** Although Right to be informed is not a fundamental right under the constitution but it but protects the fundamental rights to Freedom of Expression and Speech under Article 19(1) (a) and Right to Life and Personal Liberty under Article 21 guaranteed by the Constitution.
- Further, it is a statutory right provided by Right to information Act.

Way Forward:

- Minute details of selection of Lokpal cannot be denied by argument that the panel has high level dignitaries.
- Only section 8 of the RTI provides for non-disclosure of the informations which would prejudicially affect the sovereignty and integrity of India and the security, strategic, scientific or economic interests of the country. But the office of Lokpal does not include these provisions. Hence must be kept transparent.
- Lokpal and Lokayukta must be financially, administratively and legally independent of those whom they are called upon to investigate and prosecute.
- Lokpal and Lokayukta appointments must be done transparently so as to minimize the chances of the wrong sorts of people getting in.

RESURFACING OF ANDHRA PRADESH ODISHA BORDER DISPUTE

Recently, Andhra Pradesh held panchayat elections in three villages in the Kotia cluster, which is claimed by Odisha.

About:

- Andhra Pradesh and Odisha have been claiming their rights over Kotia panchayat which comprises 28 villages.
- Andhra Pradesh held panchayat elections in three villages in the Kotia cluster, which is at the centre of a dispute between Andhra Pradesh and Odisha. In response, the Odisha government has filed a plea in the supreme court (SC).
- In the early 1980s, Odisha filed a case in the Supreme Court demanding right and possession of jurisdiction over the 21 villages. In 2006, the court ruled that the matter can only be resolved by Parliament and passed a permanent injunction on the disputed area because disputes belonging to the state boundaries are not within the jurisdiction of the SC.

The peculiarity of the situation:

- **Participation in the election:** Though this is the first time the state of Andhra Pradesh has held panchayat polls in any of these villages. But the villages participate in Assembly and Lok Sabha elections for both Odisha and Andhra Pradesh. They are registered as voters for Salur Assembly and Araku Lok Sabha seats of Andhra Pradesh, and Pottangi Assembly and Koraput Lok Sabha seats of Odisha.
- **Double benefit:** The villagers enjoy benefits from both states under various schemes.
  - For instance, the government of Odisha had constructed a gram panchayat office, a village agricultural centre, the office of an agricultural overseer, a boarding school, and a 380-bed hostel;
  - The government of Odisha has also implemented MGNREGA and distributed BPL cards to over 800 families and job cards to 1800 families.
  - On the other hand, the Andhra Pradesh government has built roads, supplied electricity, and provided rations to BPL families.
- **Lack of governance and problem of Left-wing extremism:** The role of two governments creates confusion in the process of governance. The law implementing agencies finds it difficult to coordinate on issues of law of order. The left-wing extremists take advantage of such a situation and conduct their operations.

Way Forward:

- **The role of the Parliament:** Article 2 and Article 3 of the constitution of India gives power to the parliament to alter, re-align, decrease or increase the boundary of any state. The parliament can solve the dispute by promulgating legislation.
- **Cooperative federalism:** Both the state government Odisha and Andhra Pradesh and also the Union government must engage in discussion to solve the problem.
- **Public Opinion:** Any plan should be adopted only after consulting with the inhabitants of the villages and also other stakeholders.
- Inter state dialogues, deliberations in Inter State councils and Tribunals and sticking the spirit of Cooperative federalism should be adopted to resolve such disputes.

NEXT IAS

5 SOCIAL ISSUES

PRADHAN MANTRI MATRU VANDANA YOJANA

The scheme aims to support pregnant and lactating mothers in their first delivery.

About:

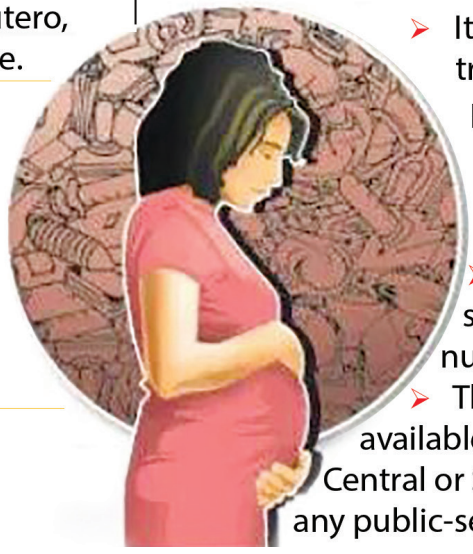
- The Pradhan Mantri Matru Vandana Yojana (PMMVY) crossed 1.75 crores, eligible women, till the financial year 2020 and Rs. 5931.95 Cr was paid to the beneficiaries between 2018-20.

Pradhan Mantri Matru Vandana Yojana:

- The scheme was announced on Dec 31, 2016, by the Prime Minister and its benefits are available to the eligible beneficiaries for the first living child only.
- Pradhan Mantri Matru Vandana Yojana (PMMVY) is a maternity benefit program being implemented in all districts of the country with effect from 1st January 2017.
- **Nodal Ministry:** It is a Centrally Sponsored Scheme of the Ministry of Women and Child Development.
- **Implementation structure:** PMMVY is implemented using the platform of Anganwadi Services scheme of Umbrella Integrated Child Development Services (ICDS).
- **Features-**
  - **Cash transfer-** Pregnant women and lactating mothers (PW&LM) receive ₹ 5,000 on the birth of their first child in three installments, after fulfilling certain conditionalities viz. early registration of pregnancy, ante-natal check-up, and registration of the birth of the child, and completion of the first cycle of vaccination for the first living child of the family.
  - **Other incentives-** The eligible beneficiaries also receive cash incentives under Janani Suraksha Yojana (JSY). Thus, on average, a woman gets Rs. 6,000.
  - **Exceptions-** Those who are in regular employment with the Central Government or State Government or Public Sector Undertaking or those who receive similar benefits under any law for the time being in force.
  - **Miscarriages-** In case of miscarriage/stillbirth, the beneficiary would be eligible to claim the remaining installment (s) in event of any future pregnancy.

MATTER OF HEALTH

- Under-nutrition continues to adversely affect women in India
- Every third woman is under-nourished, while every second woman is anaemic
- Under-nourished women often given birth to babies with a low birth weight
- When poor nutrition starts in-utero, it extends throughout the life cycle.
- Owing to economic and social distress, many women continue to work to earn a living for their family up to the last days of their pregnancy.
- They resume work soon after childbirth, which prevents their bodies from fully recovering.
- It also impedes their ability to exclusively breastfeed during the six months



THE INITIATIVE

The Pradhan Mantri Matru Vandana Yojana provides maternity benefits of ₹5000 for pregnant women and lactating mothers after their first delivery.

- The benefits is provided in three instalments
- It is a conditional cash transfer scheme and provides a partial wage compensation to women for wage-loss during childbirth and childcare
- The scheme ensures safe delivery and good nutrition for women
- The benefits are not available for employees of the Central or State governments and any public-sector undertaking.

INSIGHTS IAS

- **Infant Mortality-** A beneficiary is eligible to receive benefits under the scheme only once. Therefore, in the case of infant mortality, she will not be eligible for claiming benefits if she has already received all the installments of the maternity benefit under PMMVY earlier.

- **Target-** According to the government's initial estimate, the scheme aims to reach 51.70 lakh women per year.
- **PMMVY- Common Application Software (CAS),** web-based application software is used by the central and state governments to monitor the scheme.
  - It is interoperable with UIDAI and Public Financial Management System (PFMS) for beneficiary authentication to avoid duplication.
  - The Scheme is completely Local Government Directory (LGD) compliant with uniform master data of all villages/ towns/cities throughout India on the PMMVY-CAS platform.

Significance:

- **Support to first-time mothers:** Normally, the first pregnancy of a woman exposes her to new kinds of challenges and stress factors. Hence, the scheme provides support to the mother for safe delivery and immunization of her first living child.
- **The benefit of DBT:** The direct benefit cash transfer helps expectant mothers meet enhanced nutritional requirements and partially compensates them for wage loss during their pregnancy.
- **Leveraging technology for governance:** Monitoring the scheme via the PMMVY-CAS platform reduces error and ensures efficiency in scheme delivery as it avoids duplication of beneficiaries, integrates local data with the national registry, and plugs leakages of funds.

Do You Know?

- **The Janani Suraksha Yojana (JSY)** is a 100% centrally sponsored scheme which is being implemented with the objective of reducing maternal and infant mortality by promoting institutional delivery among pregnant women.
- Basically, it is a safe motherhood intervention under the National Health Mission (NHM).
- Under the JSY, eligible pregnant women are entitled for cash assistance irrespective of the age of mother and number of children, for giving birth in a government or accredited private health facility.
- The scheme also provides performance based incentives to women health volunteers known as Accredited Social Health Activist (ASHA) for promoting institutional delivery among pregnant women.

INDIAN SIGN LANGUAGE DICTIONARY

The third edition of the digital Indian Sign Language dictionary has been launched recently across six categories.

About:

- The dictionary is prepared by the Indian Sign Language Research and Training Centre under the Social Justice and Empowerment Ministry.
- The new edition will comprise of 10,000 terms of daily. The second edition of the Indian Sign language was released in the year 2019 comprising of 6,000 terms while its first edition was released in the year 2018 with 3,000 terms.
- The sign language dictionary (ISL) contains signs of everyday use and their corresponding English and Hindi words. Specialized terms from legal, academic, medical, and technical fields are explained in ISL.

Salient features of dictionary:

- The dictionary has been made with the full involvement of the deaf community by ensuring that only deaf experts have provided the signs for the dictionary.
- It is available as a Google document and videos on YouTube, the dictionary includes the sign, the English term and pictures wherever relevant.
- The dictionary also includes terms used in different regions, including momos from Dehradun, bandit from Munger, Bihar, and tug of war from Haryana.
- Since the launch of the first edition in 2018, the ISL dictionary has been utilised by special educators, ISL interpreters, parents of children with hearing disabilities, professionals in the field, organisations working with people with hearing disabilities and by the general public.

Significance of the dictionary:

- The launch of the ISL dictionary is a step towards fulfilling needs of hearing and speech impaired in accordance with the Rights of Persons with Disabilities (RPWD) Act, 2016.
  - It also complies with the initiative by the United Nations Children's Fund (UNICEF) called "Accessible Digital Textbooks for All".

Impairment in India:

- The World Health Organization (WHO) report states that, prevalence of hearing impairment in India is around 6.3% as of 2018. It means around 63 million people are suffering from auditory loss.
  - Further, the adult-onset deafness in India accounts for 7.6% while the childhood-onset deafness accounts for 2%.

Way Forward:

- Further improvement with involvement of other terms which are not included in earlier editions along with accommodating the regional diversity, will go a long way in helping the deaf people to achieve their true potential and become a part of India's growth.

STARS PROJECT

The World Bank and Department of Economic Affairs signed an agreement of financial support worth Rs.3700 Cr ($500 Mn) for Ministry of Education's STARS Project.

About:

- The STARS project aims to support selected states in improving education service delivery.
- It focuses on strengthening the government-managed school education system that primarily caters to the educational needs of girls and students from marginalised groups.
  - Also the focus is on initiatives of PM e-Vidya, Foundational Literacy and Numeracy Mission and National Curricular and Pedagogical Framework for Early Childhood Care and Education as part of the Atmanirbhar Bharat Abhiyan.
- **Strengthening Teaching-Learning and Results for States (STARS)** project of Ministry of Education will be implemented as a new Centrally Sponsored Scheme under Department of School Education and Literacy.
- **Project Cost:** Rs. 5718 Cr, which will be funded by World Bank partially and the rest will be contributed by participating states over 5 years.
- **States covered:** The project covers 6 States viz Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.
- **Purpose:** To support various interventions for improving the quality of education, monitoring and measurement activities in Indian school system.
- **Implementation:** STARS will draw on existing structure under Samagra Shiksha and at the state level, the project will be implemented through the integrated State Implementation Society (SIS) for Samagra Shiksha. The Ministry of Education is the nodal implementing agency for the project.
- **It has two major components-**

  National Level: Strengthen national data systems to capture robust and authentic date on retention, transition and completion rates of students.
  - Support states in improving states PGI scores by incentivizing states governance reform agenda through SIG (State Incentive Grants)
  - Support the strengthening of learning assessment system
  - To support MOE's efforts to establish a National Assessment Centre (PARAKH)
  - Leverage experience of selected states and share it with other states.

  State Level: Strengthening Early Childhood Education and Foundational Learning
  - Improving Learning Assessment Systems
  - Strengthening classroom instruction and remediation through teacher development and school leadership
  - Governance and Decentralized Management for improved service delivery.
  - Strengthening, vocational education in schools through mainstreaming, career guidance and counselling, internships and coverage of out of school children.
- **Contingency Emergency Response Component (CERC)** under the National Component would enable the project to be more responsive to any natural, man-made and health disasters. CERC would facilitate the following:
  - The rapid re-categorization of financing (to provide flexibility in the crisis situation).
  - The utilization of streamlined financing request procedures (so that delays in financing is eliminated).
- **Measurable outcomes:** Increase in students achieving minimum proficiency in grade 3 language in selected states, improvement in secondary school completion rate, improvement in governance index scores, strengthened learning assessment systems, partnerships developed to facilitate cross-learning between states, and improvement in the State level service delivery in education through training of school heads.
- **World Bank support:** The project will be supported in the form on results-based financing instrument called Program for Results (PforR) to ensure state-level reforms through a set of disbursement-linked indicators (DLI).
- **State Incentive Grant (SIG)** matrix will be used to achieve desired outcomes and it will be aligned with PfoR instrument.
- **Independent Verification Agency (IVA)** will verify results before funds disbursement.

Significance:

- **Support to states:** The STARS project seeks to support the states in developing, implementing, evaluating and improving interventions with direct linkages to improved education outcomes and school to work transition strategies for improved labour market outcomes.
- **Focus on outcomes:** The project shifts focus from the provision of inputs and maintaining of outputs to actual outcomes by linking the receipt and disbursement of funds to these outcomes.

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- **National Education Policy 2020:** The project will be instrumental in the implementation of National Education Policy 2020 i.e. Strengthening Early Childhood Education and Foundational Learning, Improving Learning Assessment System, ICT-enabled approaches in education, Teachers Development and Vocational education etc.

Way Forward:

- The STARS programme builds on the long partnership between India and the World Bank for strengthening public school education and to support the country's goal of providing 'education for all'.
- STARS will support India's renewed focus on addressing the 'learning outcome' challenge and help students better prepare for the jobs of the future – through a series of reform initiatives.

MINIMUM AGE OF MARRIAGE FOR WOMEN

The Central government has set up a committee to reconsider the minimum age of marriage for women.

About:

- Union Budget 2020-21 proposed to set up a committee to examine matters related to women i.e. age of motherhood; maternal mortality rate; nutritional level among women, and it would also correlate the role of age of women on aforesaid indicators.
- The committee is now set up and it is headed by Jaya Jaitely.
- Committee will also look at some of other parameters like Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR), Child Sex Ratio (CSR),Total Fertility Rate (TFR), Sex Ratio at Birth (SRB) and will examine the possibility of increasing the age of marriage for women from the present 18 to 21 years.

Current age Provisions for marriage:

- For Hindus, according to "The Hindu Marriage ACT,1955" minimum age of marriage for men is 21 years and it is 18 years for women. Child marriages are however not illegal, even though they can be declared as void at the request of the minor in the marriage.
- In Islam, the marriage of a minor who has attained puberty is considered valid.
- The Special Marriage Act, 1954 and the Prohibition of Child Marriage Act, 2006 also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men respectively.
- The law prescribes a minimum age of marriage to essentially outlaw child marriages and prevent the abuse of minors.

Arguments in favor:

- **Gender neutrality:** It would ensure the same age of marriage for both men and women and would also eliminate the stereotype that women are more mature than men of the same age and that's why they are allowed to marry sooner.
- **Early pregnancy:** According to International Food Policy Research Institute (IFPRI), children born to adolescent mothers i.e. age (10-19 years) are 5 percentage points more likely to be stunted (shorter for their age) than those born to young adults i.e. age (20-24 years). Moreover early pregnancies are associated with increased child mortality rates and also affects the health of the mother.
- **Education and Employment:** Increasing the age of marriage may allow girls to have higher education, it would increase the employment opportunities for them. Marriage of girls at an early age is one of the critical reasons for low female labour force participation in India (around 25% only).
- **Economic growth:** According to the world economic forum, in India if women are given equal employment opportunities as that of men, its GDP can be increased by 27%. It would further help in our target of becoming $ 5 trillion economy by 2025.

Issues associated with increasing minimum age:

- Despite the laws mandating minimum age and criminalizing sexual intercourse with a minor, child marriages are very prevalent in the country. According to UNICEF each year, at least 1.5 million girls under the age of 18 are married in India and it makes India home to the largest number of child brides in the world accounting for a third of the global total.
- The National Coalition Advocating for Adolescent Concerns asserts that increasing the legal age of marriage for girls will not only artificially expand the numbers of married persons deemed underage but also criminalize them and render underage married girls without legal protection".
- The issue of minimum age of marriage, especially for women, has been a contentious one. The current law itself evolved in the face of much resistance from religious and social conservatives. Further tweaking with the law may bring the allegation on the government for interfering in personal and religious matters of people.

Way Forward:

- Early marriage of women deprives them of better education, employment and health opportunities. It reduces their socio-economic participation, makes them dependent on men and perpetuates a secondary status in the long term.
- It is equally important to ensure perfect implementation of minimum age marriage laws to get the desired results.
- Moreover transformative and well-resourced measures that increase girls' access to health, education and employment.

SOCIAL SECURITY AND WELFARE MEASURES FOR INTER STATE MIGRANT WORKERS

The Standing Committee on Labour submitted its report on social security and welfare measures for inter-state migrant workers.

About:

- On 11 Feb 2021, The Parliamentary Standing Committee on Labour submitted its report on "Social Security and Welfare Measures for Inter-State Migrant Workers".
- The Committee noted that Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is the best scheme for providing sustainable livelihoods to unskilled workers (including migrant workers).
- The committee also recommended that the process of issuing job cards to labourers by state governments be made more transparent to ensure that no labourer is deprived of employment, as job cards are most essential documents for any individual demanding work under MGNREGS.

MGNREGS

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

- MGNREGS is one of the largest social security programmes in the world.
- The Mahatma Gandhi National Rural Employment Guarantee Act was passed on 23rd August 2005 and it was launched on 2nd February 2006
- The Objective of the scheme is to guarantee unskilled manual work for 100 days within 5 KM of residence in every financial year to adult members of any rural household willing to do public work.
- Under MGNREGA at least one-third of beneficiaries have to be women.
- It's a demand driven scheme and the work should be provided to a person within 15 days of demanding it, failing which an 'unemployment allowance' must be given to that person.
- The act mandates Gram sabhas would recommend the works that are to be undertaken, moreover at least 50% of the works must be executed by them only.

Standing Committees Observations:

- **MGNREGS:** This is the best scheme to provide "sustainable livelihood" to unskilled workers. Over 10 crore individuals have availed of the scheme and 330 crore person days have been created till February 2021 in the current financial year. This is the highest work given for any year since its inception in 2006. It shows the contribution of MGNREGS in providing employment during Pandemic.
- **Migrant Workers:** Around 1 crore migrant workers came back to their home states during the pandemic. Due to lack of exact data about the migrant workers who returned to their home state, has impacted the relief and rehabilitation work quite a great extent.
- **Relief Programmes:** There were a number of good initiatives launched by the Government like Pradhan Mantri Garib Kalyan Yojana which were aimed at benefiting the Migrant Labour. But no guidelines were given for distribution of relief material to stranded migrant labourers. Moreover Social Audits were also not prescribed.

Suggestions by Standing Committees:

- **Instant and Immediate Relief:** Steps should be taken to provide relief to persons who suffered the most during the pandemic. Various challenges and loopholes observed in the system during the pandemic should be addressed immediately to strengthen the preparedness for future challenges like it.
- **Credible Database to be Prepared:** Of the unorganised sector workers, especially the migrant workers to implement the required initiatives and ensure seamless supply of relief material during such times of distress. Though in December 2020, the Government has already decided to create a database of informal workers including migrant workers.

Way Forward:

- The success of MGNREGS during the pandemic shows the importance of decentralised planning in the governance process. That's why local bodies like gram panchayats should be provided with adequate powers, resources and responsibilities to initiate or sanction required steps to be taken at grass root level.
- The pandemic has demonstrated the importance of decentralised governance.
- Gram panchayats need to be provided with adequate resources, powers, and responsibilities to sanction works, provide work on demand, and authorise wage payments to ensure there are no delays in payments.
- Social Auditing creates accountability of performance, especially towards immediate stakeholders. Hence, there is a need to create awareness regarding government policies and measures in rural areas.
- Data is the most important thing, it acts like a currency in recent times. So data of every socio-economic activity should be maintained effectively to maximize its use in the developmental process.

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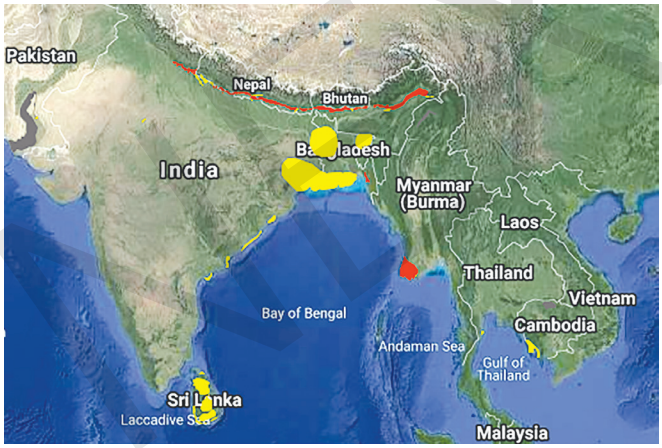
6 ENVIRONMENT

FISHING CAT CONSERVATION ALLIANCE (FCCA)

The Fishing Cat Conservation Alliance started a worldwide campaign to raise awareness for the conservation of fishing cats.

About:

- **Fishing Cat Conservation Alliance (FCCA):** It is a team of conservationists, researchers, and fishing cat enthusiasts working to achieve a world with functioning floodplains and coastal ecosystems that would ensure the survival of the fishing cat and all species with which it shares a home. Its functions include,
- Conducting research and studies to determine the ecological needs of the fishing cat
- Supporting the conservation of fishing cats and their natural habitats within their geographical range in South and Southeast Asia,
- Working with local partners around the world to identify and mitigate threats to the species,
- Engaging the local communities in conservation efforts



About Fishing Cat:

- The fishing cat **(Prionailurus viverrinus)** is thought to be primarily nocturnal, and is very much at home near water.
- It can swim long distances, even under water.
- Apart from fish, a fishing cat also preys on frogs, crustaceans, snakes, birds, and scavenges on carcasses of larger animals.
- It is the state animal of the state of West Bengal
- **Habitat:** The fishing cat is found primarily in wetland and mangrove habitats. Confirmed records show fishing cat populations to be present in Sri Lanka, India, Nepal, Cambodia, Thailand, Pakistan, Bangladesh, and Myanmar. Some populations in Sri Lanka having even been recorded in highly urbanized landscapes and montane forests.

Conservation status:

- **ICUN:** Fishing Cat is classified as **Vulnerable** under the IUCN Red List of Threatened Species
- It is also listed under CITES Appendix II
- Fishing Cat is listed in Schedule I of the Indian Wildlife Protection Act, 1972
- **Threat:** Several factors are posing threat to the survival of the species.
- **Habitat loss and fragmentation** which includes wetland degradation and conversion for aquaculture and other commercial projects,
- **Sand Mining** along river banks
- **Agricultural Intensification** resulting in loss of riverine buffer
- **Conflict with humans** over poultry and livestock, resulting in targeted hunting and retaliatory killings
- **Demand for bushmeat** and trade for captive wildlife
- **Fishing Cat in India:** In India, its presence has been documented in the following areas,
- Ranthambhore Tiger Reserve (Rajasthan), in Pilibhit Tiger reserve, Dudhwa Tiger reserve, Sur Sarovar Bird Sanctuary in Uttar Pradesh, and Valmiki Tiger Reserves (Bihar),
- In the Sunderban area of West Bengal, in Lothian Island Wildlife Sanctuary in the Sundarbans.
- In Odisha's Bhitarkanika Wildlife Sanctuary and coastal districts outside protected areas,
- In Andhra Pradesh's Coringa Wildlife Sanctuary, Krishna Wildlife Sanctuary, and adjoining reserve forests.
- They are found in patches in Eastern Ghat region of India.

PONG DAM LAKE

Over a lakh migratory water birds arrived at the Pong Dam Lake Wildlife Sanctuary in Himachal Pradesh this winter.

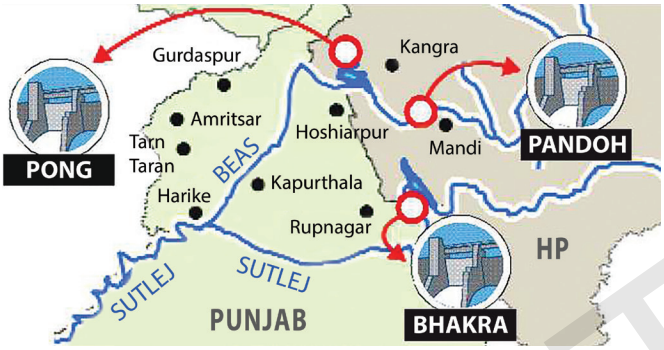
About:

- The state wildlife wing has conducted the annual waterbird count.
- **Improvement:** The waterbird census found that the habitat of migratory and resident water birds has gradually improved despite the threat of avian influenza.

- **Increase in Bird Population:** Although the total population of water birds declined due to the avian influenza outbreak, there has been a gradual increase in the total population of birds as a result of continuing containment measures being taken at the Pong Dam Lake.

Pong Dam:

- In 1962, the Pong Dam or Beas dam was constructed on the Beas river in Himachal Pradesh.
- The lake created by the 'earth-fill embankment dam' is known as the Pong reservoir, Maharana Pratap Sagar, or the Pong dam lake.



- It was declared a bird sanctuary in 1983
- In 1994, it was given the status of the wetland of national importance.
- In 2002, it got the status of a Ramsar site.
- The wetland hosts more than 1 lakh migratory birds of over 100 species, that fly thousands of kilometers from the trans-Himalayan region and Central Asia in winter every year.
- **Prominent avifauna found in this wetland includes the** Bar-headed geese, the northern pintail, the Eurasian coot, the common teal, the common pochard, the northern shoveler, the great cormorant, the Eurasian wigeon, and the ruddy shelduck.

Bar-headed geese:

- It is the flagship species of Pong dam lake.

Habitat:

- Bar Headed Geese breed in high-altitude wetlands that are up at 4,000 to 5,000 metres
- They are one of the highest flying birds of the world. The Bar Headed Goose has been sighted flying above Mount Everest. During winter, they come down to low-lying place.
- During summer, the Bar Headed Geese breed in the high-altitude wetlands of Tsokar in Ladakh, and during winter they breed in Jammu and also at Pong Dam Lake.
- **Conservation Status:** Least Concern (IUCN).

HYDERABAD WINS GLOBAL 'TREE CITY' STATUS

Hyderabad city has been chosen as one among the 'Tree Cities of the World'.

About:

- It was chosen by the Arbor Day Foundation jointly with the Food and Agriculture Organisation of the United Nations Organisation.
- **Hyderabad is the only city** in the country to have been selected for this recognition in response to its commitment to growing and maintaining urban forestry through **Haritha Haram programme.**
- It is a testament to its sustained and institutional efforts
  - to plant, nurture, and celebrate trees,
  - development of urban and peri-urban forestry actions, projects, and
- The city was evaluated based on the five standards
  - 'Establish Responsibility',
  - 'Set the Rules',
  - 'Know What You Have',
  - 'Allocate the Resources', and
  - 'Celebrate the Achievements'
- Thus, the city has become a part of an important global network leading the way in urban and community forestry and will be recognised globally.

The Haritha Haram programme:

- The program was launched by Telangana Chief Minister Kalvakuntla Chandrashekar Rao on 3 July 2015.
- **Aim:** It is one of the Telangana Flagship programmes to rejuvenate degraded forests, protecting these forests from threats such as smuggling, encroachment, fire and grazing.
  - It envisages to take the State's green cover from 24 per cent to 33 percent and make villages and cities clean and green making them livable and cooler.
- **Methods:** It adopts intensive soil and moisture conservation measures based on a watershed approach.
- **Monitoring:** Specific duties and responsibilities are assigned to different committees to ensure the implementation of the programme in a well-designed way.
- These committees do regular field inspections and monitor the ongoing plantation and nursery works.
  - The committees are the State Level Steering Committee and the District Level Monitoring and Co-ordination Committee.
- **At the village level, Haritha Rakshana Committees** are formed to monitor the program under the Chairmanship of Gram Sarpanch.

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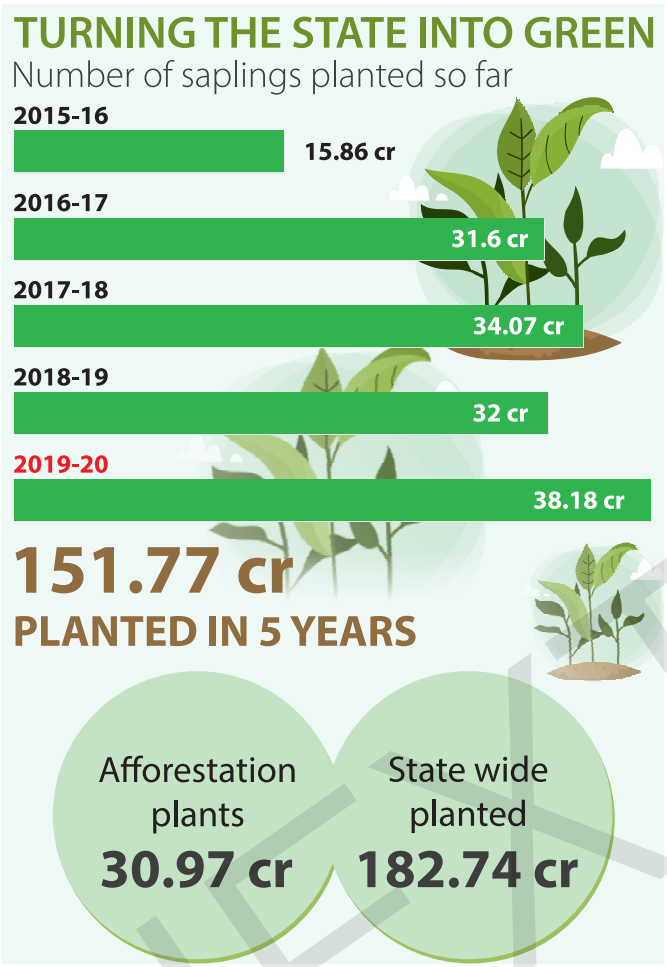
- The seedlings are monitored through geo-tagging. The Forest Department posts survival percentage details on the Department.



Significance of Haritha Haram programmeL:

- The latest 'India State of Forest Report (ISFR 2019) has confirmed that Telangana is one of the few States in the country that have increased its forest cover with the help of this programme.
- The State could achieve this by afforestation measures with the help of CAMPA funds by
  - taking up plantation of trees on decaying forests,
  - taking up avenue plantation and
  - compensatory afforestation to compensate the forest land submerged under lift irrigation projects such as Kaleshwaram.
- **The Kaleshwaram project** on the other hand has helped the afforestation measures of the State by improving ground water and surface water level boosting the growth of plants.
- It's sixth phase began in June 2020 with a theme of "Jungle Bachao Jungle Badhao", giving highest priority to Agro-Forestry so that farmers benefit out of Haritha Haram programme.

ARBOR DAY FOUNDATION

- Founded in 1972, it is the largest non-profit membership organization dedicated to planting trees.
- Their vision is to help others understand and use trees as a solution to many of the global issues we face today, including air quality, water quality, a changing climate, deforestation, poverty, and hunger.

LEOPARD POPULATION TRACKING GETS NEW APPROACH

Experts have come up with a system that helps in properly estimating the leopard population in areas sustaining a mix of rosette and melanistic individuals.

About:

- The new **Spatial Mark-Resight (SMR) Model** has been developed by the scientists of Aaranyak, Panthera and World-Wide Fund for Nature-India.
- The SMR method is expected to make it easier to assess the population status of leopards in areas where some of the spotted cats are melanistic or black.
- It will thus help in informed conservation measures.

Challenges in estimating density of leopards:

- Wildlife specialists have for long faced challenges estimating the density of leopards in areas where some of the spotted cats are melanistic or black.
- **Rosette leopards:** When a population has only rosette leopard, estimating their population size becomes easy because all the individuals can be identified.
  - **Rosettes** are jagged black circular marks on the tawny coat of a leopard.
  - Like the tiger's stripes, the rosettes of each leopard are unique in shape and size, making the species identifiable individually.
- Unlike rosette leopards, a black leopard can often not be reliably identified individually.
  - **Melanistic leopards have invisible Rosettes** — commonly called black leopards or black panthers or ghongs (Assamese) — have been difficult to estimate as their rosettes are invisible.
- This problem is acute in the tropical and subtropical moist forests of South and Southeast Asia where the frequency of melanistic leopards is high and leopards also face the greatest threat.
- No precise estimates of leopard population could thus be done in protected areas and non-protected areas in India except on some occasions.

Status of Leopards in India

Status of leopards in India, 2018' report

- The largest number of leopards have been estimated in Madhya Pradesh (3,421) followed by Karnataka (1,783) and then Maharashtra (1,690).
- In region wise distribution
  - Central India and Eastern Ghats have the highest number of leopards at 8,071.
  - Western Ghats region - 3,387 leopards
  - Shivalik and Gangetic Plains - 1,253 leopards
  - Northeast hills - 141 leopards
- The study was conducted through
  - camera capturing
  - satellite imaging and
  - field work by teams of forest officers along with teams of the Wildlife Institute of India and National Tiger Conservation Authority (NTCA)
- The report alerted that though the estimated number of leopards has increased, the leopard habitat area has been shrinking alarmingly over the past 100-125 years.
- In the Indian subcontinent poaching, habitat loss, depletion of natural prey and conflict are major threats to leopard populations.

Indian Leopard or Common Leopard

- Listed in Schedule I of the Indian Wildlife (Protection) Act, 1972.
- Included in Appendix I of CITES.
- IUCN Status - Vulnerable

Organisations involved in developing SMR model

- **Aaranyak**
  - It is a leading wildlife non-governmental organization based in Guwahati, Assam.
  - It was founded in 1989
  - It focuses on conserving nature, natural resources and biodiversity in Northeast India and the Eastern Himalayas.
- **U.S.-based Panthera:** It is the only organisation in the world devoted exclusively to the conservation of the world's 40 wild cat species and their ecosystems.

World Wide Fund for Nature-India (WWF India)

- It was founded with the express objective of ensuring the conservation of the country's wildlife and natural habitats.
- It was set up as a Charitable Public Trust on 27 November 1969.

Spatial Mark-Resight (SMR) Model:

- In this model, the photo-captured images of the leopards are extracted.
- Then the rosette leopards are identified individually using the camera trapping data between 2017 and 2019 obtained from Manas National Park.
- Thereafter, a capture history (putting date, GPS locations, the individual ID of each unique photo-capture of leopard) is prepared by incorporating rosette leopards and melanistic leopards.
- Finally, the capture history information of the rosette leopards is borrowed and that information is applied on the melanistic leopards to estimate the entire population size of leopards.

MANDARIN DUCK

Mandarin duck has been sighted after 118 years in Maguri-Motapung beel (or wetland) in Assam.

About:

- The mandarin duck rarely visits India as it does not fall in its usual migratory route. It is thus believed to have landed in Assam by accident.
- It has raised hopes for **Maguri-Motapung beel (or wetland)** that was affected by a blowout and fire at a natural gas well located close by in May 2020.

Mandarin Duck (Aix galericulata)

- It was first identified by Swedish botanist, physician and zoologist Carl Linnaeus in 1758.
- **It is often described as the most beautiful duck in the world. The eBird website** describes it as a "small-exotic looking bird" native to East Asia.
- These ducks are believed to extremely agile fliers, able to drift and manoeuvre through trees with great proficiency.
- **Geographical Habitat**
  - The migratory duck primarily breeds in Russia, Korea, Japan and northeastern parts of China.
  - It now has established populations in Western Europe and America too.
- **IUCN status** - Despite its rarity, it's not a globally threatened species.

It's appearance in India

- The mandarin duck has also been sighted in the past in
  - Saatvoini Beel in Assam's Manas National Park and Tiger Reserve in 2014.

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Key Facts

Fire and oil spill disaster in Maguri-Motapung beel in May 2020

- The beel was adversely affected by a blowout and fire at an Oil India Limited-owned gas well.
- The fire had burnt a large portion of the grassland and it had posed a great ecological threat to this wetland.
- The resulting oil spill had killed a number of fish, snakes as well as an endangered Gangetic dolphin.

Ebird

- It is a global, online database platform for collating observations of birds, and for birders to maintain records of their sightings.
- It is housed in Cornell University's Laboratory of Ornithology.

Bombay Natural History Society (BNHS)

- It is a pan-India non-governmental wildlife research organization that has been promoting the cause of nature conservation since 1883.
- **BNHS Mission:** Conservation of nature, primarily biological diversity through action based on research, education and public awareness.

Dibru Saikhowa National Park

- It is a National Park as well as a Biosphere Reserve situated in the south bank of the river Brahmaputra in the extreme east of Assam state in India.
- The forest type of Dibru-Saikhowa comprises of semi-evergreen forests, deciduous forests, littoral and swamp forests and patches of wet evergreen forests.

    - Manipur's Loktak Lake in 2013.
    - Dibru river in the Rongagora area in Tinsukia district of Assam in 1902.

Maguri beel and Its significance

- **The Maguri Motapung wetland** is declared as an Important Bird Area by the Bombay Natural History Society.
- **It is located close to the Dibru Saikhowa** National Park in Assam's Tinsukia district.
- The entire ecosystem (grassland and wetland) is very important as it is home to at least 304 bird species, including a number of endemic ones like Black-breasted parrotbill and Marsh babbler.
- The sighting of the Mandarin duck tells us is that Maguri Beel is still an important place for migratory birds after it took a hit because of the blowout and fire.

BENGALURU SCIENTISTS DEVELOP NEW MARIGOLD VARIETY

Indian Institute of Horticultural Research(IIHR) has come out with a new variety of Marigold flower called "Arka Shubha variety of Marigold".

About:

- **Name:** Arka Shubha
- Developed by Indian Institute of Horticultural Research (IIHR).
- It is mostly herbaceous plants belonging to the sunflower family Asteraceae.
- The flowers are native to the Americas, growing naturally from the southwestern United States into South America. However, some species have become naturalized around the world.
- It has **2.8 % carotene content (Normal flower has 1.4% carotene content)**, sought after by the pharmaceutical sector.
    - Carotene is mainly used in the pharmaceutical sector. Presently, India imports most of its carotene from China and other countries.
- The utility of these flowers doesn't degrade even after they have wilted.
- Apart from **ornamental and pharmaceutical use**, it can be used in **Poultry** as livestock feed **(Yolk Quality improves)**.

SUSTAINABLE DEVELOPMENT OF LITTLE ANDAMAN ISLAND

NITI Aayog has published a plan titled 'the Sustainable Development of Little Andaman Island Vision Document'.

About:

- **Purpose of the Vision Document:**
    - To leverage the strategic position of the little Andaman island as it is close to strategic chokepoint Malacca strait.
    - Attract tourists to enjoy the natural features of the island and generate revenue and employment.
    - Development of a greenfield coastal city which will be a free trade zone.
- **Development Zone:** The coastal city will be divided into three zones with different facilities,
    - **Zone 1:** The financial district

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- This will spread over 102 sq km along the east coast of Little Andaman
- The financial district will include medi city, an aerocity, and a tourism and hospital district.

- **Zone 2:** the leisure zone
  - This will spread over 85 sq km of pristine forest,
  - It will have a film city, a residential district, and a tourism Special Economic Zone(SEZ).
- **Zone 3:** the nature zone
  - The nature zone will spread over 52 sq km of pristine forest on the western coast
  - It will be categorised into three districts: an exclusive forest resort, nature healing district, and a nature retreat.

- **Infrastructure and transport:**
  - **Recreational facilities:** 'Underwater' resorts, casinos, golf courses, etc.
  - **Air connectivity:** An international airport would be established which is capable of handling all types of aircraft
  - **Maritime connectivity:** The only jetty on the island will be expanded and a marina will be developed next to the tourist entertainment district.
  - **Road transport:** A 100 km greenfield ring road will be constructed parallel to the coastline from east to west.
    - The ring road will be supplemented with a mass rapid transit network with stations at regular intervals.

Challenges to developmental project:

- **Ecological fragility:** 95% of Little Andaman is covered in forest and a large part of the forest is an evergreen type.
- **Reserve Area:** 640 sq km of the island is Reserve Forest under the Indian Forest Act, and nearly 450 sq km is protected as the Onge Tribal Reserve.
- **Indigenous rights:** There is an urgent need to protect the lives, livelihood and rights of the indigenous tribes.
  - Four negrito tribes of the Andaman Islands, namely Jarawa, Onge, Sentinelese and Great Andamanese have been categorized as PVTG or Particularly vulnerable tribal group.
- **Connectivity:** There is a lack of efficient connectivity with the Indian mainland and global cities
- **Recommendations in the Plan**
  - **De-reservation:** The plan recommends to de-reserve 32% of the reserved forest and to de-notify 138 sq km or 31% of the tribal reserve.
  - **Relocation:** It is proposed to relocate the aboriginal inhabitants to other parts of the island.

Problem with the Development Vision:

Several scholars, anthropologists, conservationist, forest officials have pointed out the problems with the plan, they argue that

- **Ignores the geological vulnerability:** The place is vulnerable to a geologic catastrophe such as earthquake and tsunami, it was amongst the worst-affected place in the earthquake-tsunami combination in 2004.
- **Inadequate financial details:** The plan does not mention how the projects will be implemented, who will be responsible for expenditure, and other budgeting details.
- **Ignores environmental cost:** The plan does not account for the change in the inventory of forests and ecological wealth. There is no provision of any environmental impact assessment.
- **Threatens bio-diversity:** The plan proposes to establish a nature resort complex at West Bay on the western coast. But the secluded region is one of the most important nesting sites of the globally endangered Giant Leatherback sea turtle.
- **Diversion of the forest:** More than 2 million trees stand in the forest land sought for these projects, large diversion of forest land would cause environmental loss leading to irreversible damage.

Little Andaman

- Little Andaman is separated from Rutland Island in Great Andaman by the Duncan Passage.
- The island is home to the Onge aboriginal tribe. Settlers from Bengal and other places also live here. A tribal reserve had been set up in 1957.
- The main village is Kwate-tu-Kwage which is located on Hut Bay.

Onge

- The Onge were semi-nomadic and depends on hunting and gathering for food.
- Onges are one of the aboriginal people of India
- Ethnically, they belong to negrito group and believed to be the remnant of the first set of human migration out of Africa.
- The surviving members are confined to two reserve camps on Little Andaman, Dugong Creek in the northeast, and South Bay.
- Currently, there are less than a hundred native speaker of the Onge language, making it an endangered language.

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7 SCIENCE & TECHNOLOGY

MISSION GAGANYAAN

Recently, the Union Minister has informed the Parliament that human spaceflight module of Gaganyaan will be launched after the second unmanned mission planned in 2022-23.

About:

- **Mission Gaganyaan:** It was initially envisaged that the **Rs 10,000 crore Gaganyaan mission** aims to send a **three-member crew to space for five to seven days** by 2022 when India completes 75 years of independence.
- Recently, Union Minister has informed Loksabha that **first unmanned mission is planned in December 2021. Second unmanned flight is planned in 2022-23,** followed by human spaceflight demonstration.
- The launch has been delayed because of the coronavirus-forced lockdown.
- Due to COVID-19 crisis astronaut training at Gagarin Cosmonaut Training Center (GCTC), Russia was halted for a period for nearly a month and a half last year.

HOPE PROBE MISSION

Recently, United Arab Emirates' (UAE) first ever interplanetary Hope Probe Mission has successfully entered orbit around Mars.

About:

- **Hope Probe Mission:** First announced in July 2014, the Emirates Mars Mission (Hope orbiter) was launched in July 2020 from the Tanegashima Space Centre in Japan aboard a Mitsubishi Heavy Industries' H-II A rocket.
- **Carrying three instruments,** including a high-resolution camera and a spectrometer, the spacecraft is on an orbital mission to collect data on Martian climate dynamics and help scientists understand why Mars's atmosphere is decaying into space.
- **Hope is the UAE's fourth space mission and first interplanetary one**. The previous three were all Earth-observation satellites. Al-Amal is the name of this probe in Arabic.
- **Its overall mission life** is one Martian year, which is about 687 days on Earth.

Mission Gaganyaan : At a Glance

- **Aim:** Gaganyaan is an Indian crewed orbital spacecraft that is intended to send 3 astronauts to space for a minimum of seven days by 2022 (which has been delayed as aforementioned), as part of the **Indian Human Spaceflight Programme.**
- **Components:** The spacecraft, which is being developed by the Indian Space Research Organisation (ISRO), consists of a service module and a crew module, collectively known as the Orbital Module.
  - Crew module will carry human beings.
  - Service module is powered by two liquid propellant engines.
- **It will be for the first time that India** will launch its manned mission to space, making the country fourth in line to have sent a human to space.
- **Launched by:** ISRO's Geosynchronous Satellite Launch Vehicle **GSLV Mk III,** also known as LVM-3 (Launch Vehicle Mark-3), the three-stage heavy-lift launch vehicle, will be used to launch Gaganyaan as it has the necessary payload capability.

LVM3-X Vehicle Characteristics	
Vehicle Height	43.43 m
Lift of Mass	630.58 t
Stages	
2 S200	Two Solid propelled strap-on motors (207 t of propellant)
L110	Liquid propellant core booster
C25-X	Cryogenic upper stage (passive)

- **LEO:** The spacecraft will be placed in a low earth orbit of 300-400 km.
- **French assistance:** ISRO will receive assistance from the French space agency CNES, in terms of expertise various fields including space medicine, astronaut health monitoring, radiation protection and life support.

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- **Other Mars Mission:** The mission is one of three launched to Mars from Earth in July 2020. The other two are China's Tianwen-1 dual orbiter-rover and Perseverance from NASA. Hope was the first to arrive followed by Tianwen-1 and then Perseverance.

Objective of the Mission:

- The primary objective of the mission is to study Martian weather dynamics. By correlating the lower atmosphere and upper atmosphere conditions, the probe will look into how weather changes the escape of hydrogen and oxygen into space.
- With aforementioned studies scientists will be able to look into the reasons why Mars lost so much of its early atmosphere and liquid water.
- Al-Amal i.e Hope will be the first "true weather satellite" orbiting around the planet.
- The mission is expected to boost the UAE's science and technology sector and inspire younger generations to take up science as a career.

SANDES APP

Recently, The National Informatics Centre (NIC) has launched an instant messaging platform called Sandes on the lines of WhatsApp.

About:

- **Sandes app** has been developed by NIC. **Like WhatsApp**, the new platform can be used for all kinds of communications **by anyone with a mobile number or email id.**
- It's an **Instant Messaging (IM)** platform.

Background:

- **The Need:** Following the nationwide lockdown imposed in March 2020 in the wake of Covid-19, the government felt the need to build a platform to ensure secure communication between its employees as they worked from home.
- **After security scares,** the Ministry of Home Affairs had in April last year issued an advisory to all government employees to avoid using platforms like Zoom for official communication.
- In August 2020, the NIC released the first version of the app, which said that the app could be used by both central and state government officials "for intra and inter-organisation communication."
- **Make in India:** The launch of the app is also a part of the government strategy to push for use of India-made software so as to build an ecosystem of indigenously developed products.
- **Open to Public:** Open initially only to government officers, it has now been released for the common public as well.

Features and Differences from other IM apps:

- **Backup:** Chats on government instant messaging systems or GIMS can be backed up to a users' email. Although, there is no option to transfer the chat history between GIMS and any other IM platforms.
- **Features:** GIMS, like other instant messaging apps in the market, uses a valid mobile number or email id to register the user for the first time. It also offers features such as group making, broadcast message, message forwarding and emojis.
- **Confidentiality feature:** As an additional safety feature, it allows a user to mark a message as confidential, which will allow the recipient to be made aware the message should not be shared with others. The confidential tag, however, does not change the way the message is sent from one user to another.
- **The limitation**, however, is that the app does not allow the user to change their email id or registered phone number. The user will have to re-register as a new user in case they wish to change their registered email id or phone number on the app.

HUNTER SYNDROME

Recently, two brothers suffering from Mucopolysaccharidosis II or MPS II (Hunter Syndrome, Attenuated Type) have approached the Delhi High Court seeking direction to the Centre and AIIMS to provide them free treatment.

About:

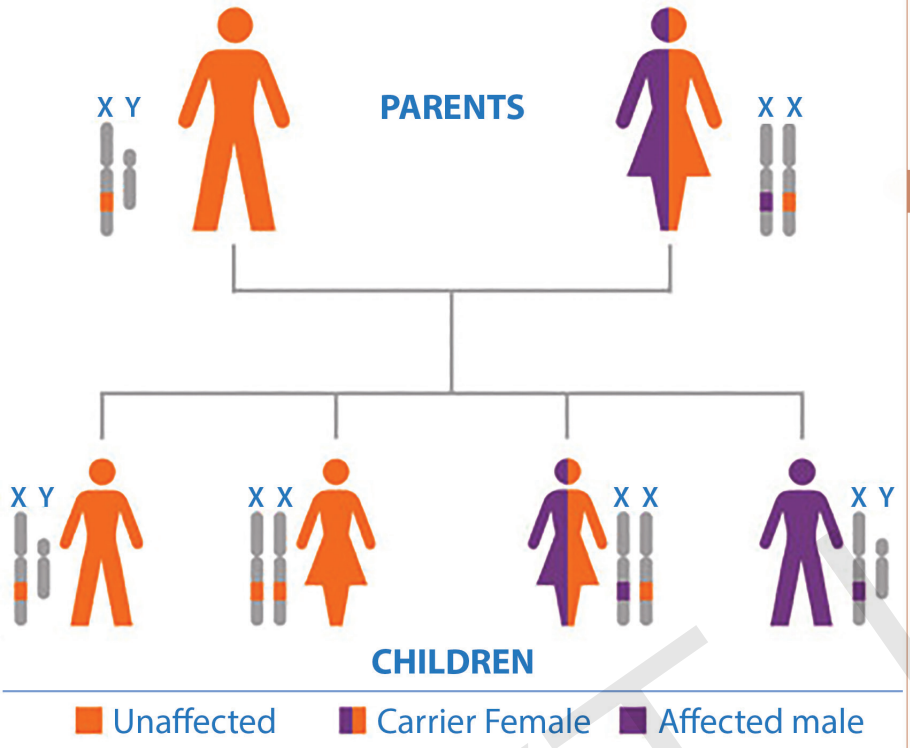
- **Rare Genetic Disorder:** Hunter syndrome, or Mucopolysaccharidosis type II (MPS II), is a rare genetic disorder in which large sugar molecules called glycosaminoglycans (or GAGs or mucopolysaccharides) build up in body tissues.
- **MPS II mostly affects boys** and their bodies cannot break down a kind of sugar that builds bones, skin, tendons and other tissues.
- **Deficiency Disease:** Hunter syndrome is caused by a deficiency of the lysosomal enzyme iduronate-2-sulfatase (I2S).
- **The lack of this enzyme** causes heparan sulfate and dermatan sulfate to accumulate in all body tissues.

Genetics:

- Hunter syndrome is an X-linked recessive disorder, it preferentially affects male patients. Females are genetic career of this condition and generally unaffected by this syndrome.

Treatment:

- Enzyme replacement therapy
- Bone-marrow and stem-cell transplantation
- Gene editing therapy



SIGNS & SYMPTOMS OF HUNTER SYNDROME

- Nose become broad
- Tongue is enlarged
- Cheeks become enlarged and rounded
- Lips thicken
- Enlarged head
- Hearing loss
- Heart valve issues
- Stiffness in joints
- Growth is restricted
- Compressed and damaged spinal cord

Rare Disease

- In **January 2021**, the Delhi High Court directed the Union Government to finalise and operationalise the new National Health Policy for Rare Diseases by 31 March 2021.
- **Rare diseases:** They are health conditions that have a very low prevalence. There are more than 7,000 diagnosed rare diseases in the world and over 350 million individuals suffer from them, with nearly one-fifth in India.
  - **Orphan Disease:** It is a term often used for these diseases as less than five percent of rare diseases have treatment therapies available, most of which are prohibitively expensive.
  - **Cause of Rare Disease:** There are many different causes of rare diseases. The majority are thought to be genetic. In other cases, they occur randomly in a person who is the first in a family to be diagnosed.
- **Draft Policy:** The Ministry of Health and Family Welfare published a draft of the **National Policy for Rare Diseases 2020** for stakeholder inputs.

Draft National Policy for Rare Diseases

- The draft policy aims at lowering the incidence of rare diseases.
- **It is based on** an integrated preventive strategy encompassing awareness generation and screening programmes and enabling access to affordable health care to patients of rare diseases which are amenable to one-time treatment.
- **Three groups of disorders:** The draft policy states that for the purpose of the policy the term rare diseases shall construe three group of disorders identified and categorised by experts are
- **Group 1:** Disorders amenable to one-time curative treatment:
- **Group 2:** Diseases requiring long term / lifelong treatment having relatively lower cost of treatment and benefit has been documented in literature and annual or more frequent surveillance is required.
- **Group 3:** Diseases for which definitive treatment is available but challenges are to make optimal patient selection for benefit, very high cost and lifelong therapy.

MISSION INNOVATION 2.0

Recently, the Union Minister of Science & Technology addressed the Mission Innovation (MI) to mark the beginning of phase-2 of the mission or Mission Innovation 2.0.

About:

- **Mission Innovation** was announced in November **2015**, as world leaders came together in **Paris** to undertake ambitious measures to **combat climate changes.**
- **Mission Innovation (MI)** is a global initiative of 24 countries and the European Union to accelerate global clean energy innovation dramatically.
- India has played a leadership role in MI Steering Committee and is a member of the Analysis and Joint Research and Business & Investor Engagement sub-groups.

Goal of Mission Innovation (MI):

- **MI has one goal** to accelerate the pace of clean energy innovation to achieve performance breakthrough and cost reduction to provide widely affordable and reliable clean energy solutions.
- To achieve the goal MI seeks its members' commitment to:
  - Seek to **double their governmental and/or state-directed** clean energy clean energy research, development and demonstration (RD&D) **investments over five years.**
  - **Work closely with the private sector** as it increases its investment in the earlier-stage clean energy companies that emerge from government programs.
  - Build and improve technology innovation roadmaps and other tools to help in our innovation efforts.
  - Provide, on an **annual basis, transparent, easily-accessible information** on their respective clean energy RD&D efforts.

Objectives of Mission Innovation (MI):

- **Enhance the public sector investment** to a substantial level.
- **Increased private sector engagement** and investment.
- Increase international collaboration.
- **Raising awareness** of the transformational potential of innovation.

Innovation Challenges (ICs) under Mission Innovation (MI):

- ICs are a major part of the MI and they are aimed at leveraging research, development, and demonstration (RD&D) in technology areas that could ultimately result in effective ways to reduce greenhouse gas emissions, increasing energy security, and creating new opportunities for clean economic growth.
- **8 Innovation Challenges** under this mission are:
  - IC1 – smart grids
  - IC2 – Off-grid access to electricity
  - IC3 – Carbon capture
  - IC4 – Sustainable biofuels
  - IC5 – Converting sunlight
  - IC6 – Clean energy materials
  - IC7 – Affordable cooling and heating of buildings
  - IC8 – Renewable and clean hydrogen

About Mission Innovation 2.0 (MI 2.0):

- After promising results shown by first phase of Mission Innovation, to achieve the shared goal of accelerating innovation, all the members have agreed to develop a second phase (2.0).
- Phase 2 of Mission Innovation includes:
  - An **enhanced Innovation Platform building** on current activities to **strengthen the global clean energy innovation ecosystem** and to accelerate learning.
  - **New public-private innovation alliances – Missions –** built around ambitious and inspirational goals **backed by voluntary commitments** that can lead to tipping points in the cost, scale, availability, and attractiveness of clean energy solutions.

Indian Initiatives Aligned with the Mission:

- **Clean Energy International Incubation Centre:** To support the start-up innovation ecosystem, the Clean Energy International Incubation Centre established by the Department of Biotechnolo-gy, India under a Public Private Partnership model has played a crucial role.
- **Increased Solar Capacity:** India has increased solar installed capacity by 13 times and expanded its non-fossil fuel-based power generation to 134 Gigawatts, about 35% of total power generation.
  - The National Solar Mission (a part of the National Action Plan on Climate Change) helped India to increase its solar capacity. India has embarked on an ambitious target of having 450 Gigawatts of renewable energy by 2030.
- **Biofuels:** India is also working to considerably increase the proportion of the biofuel blend in petrol and diesel:
  - **Ethanol Blending Programme (EBP):** It aims at blending ethanol with petrol, thereby bringing it under the category of biofuels and saving millions of dollars by cutting fuel imports. The 2018 Biofuel Policy has the objective of reaching 20% ethanol-blending and 5% biodiesel-blending by the year 2030.
- **Ujjwala Yojana:** Pradhan Mantri Ujjwala Yojana (PMUY) which is the world's most exten-sive clean cooking fuel programme was launched in 2016 and is imple-mented by the Ministry of Petroleum and Natural Gas through its Oil Marketing Companies.

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MISSION INNOVATION

accelerating the clean energy revolution

A GLOBAL INITIATIVE WORKING TO ACCELERATE CLEAN ENERGY INNOVATION

1 GOAL

To **accelerate** the pace of clean energy **innovation** to achieve performance breakthroughs and cost reductions to provide widely **affordable** and **reliable clean energy** solutions.

25 MEMBERS

Launched in 2015 at COP21 in **PARIS**

MI Members represent about 80% of global government investment in clean energy RD&D

4 OBJECTIVES

- Substantial boost in public sector investment
- Increased private sector engagement and investment
- Increasing international collaboration
- Raising awareness of the transformational potential of energy innovation

8 INNOVATION CHALLENGES

Global collaborations to accelerate innovation in key technology areas

- **IC1** Smart Grids
- **IC2** Off-grid Access to Electricity
- **IC3** Carbon Capture
- **IC4** Sustainable Biofuels
- **IC5** Converting Sunlight
- **IC6** Clean Energy Materials
- **IC7** Affordable Heating and Cooling of Buildings
- **IC8** Renewable and Clean Hydrogen

19 MISSION INNOVATION CHAMPIONS

A program for recognizing and supporting the next wave of energy technology leaders

6 MAJOR COLLABORATORS

BEC	Breakthrough Energy Coalition
GCoM	Global Covenant of Mayors for Climate and Energy
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
WBG	World Bank Group
WEF	World Economic Forum

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8

ETHICS

INTERNATIONAL ETHICS AMID GLOBALIZATION

Globalization has brought together different regions, races and civilization together bound by international ethics.

About: International Ethics:

- It is an area of international relations theory which is concerned with the extent and scope of ethical obligations between states in an era of globalization.
- It concerns ethical questions and dilemmas, whether for individuals or societies, that arise in view of economic, technological, legal, political, social, and cultural globalization.
- Global ethics expand upon personal and professional ethics to include a more extensive set of principles that may apply to groups of people or cultures. They can include such areas and debates as social justice, human rights, caring for the environment across national borders, social responsibility and accountability, and interdependence gained through encompassing a worldview.

Ethical Dilemmas in international ethics:

- **Humanity Vs Nationalism:** Nationalism in current geopolitics has over-shadowed other ethical values such as humanity. Refugee crisis in Europe saw a tug of war between humanists and nationalists.
- **Charity Vs Wealth Creation:** World after globalization has become a global village. Hence, it must opt for trusteeship theory of Mahatma Gandhi.
- According to this theory, the wealthy people would be the trustees of trusts that looked after the welfare of the people in general.
- However, developed countries across the world are not following these ethical principles.
- **For Example:** Countries like United States and Israel have left prestigious environment organizations and treaties as well as welfare institutions such as UNESCO.
- This has led to crunch in development funds in these areas.
- **Economic development Vs Neo-Colonialism:** Current situation of the global geopolitics has underlined the phenomenon of 'Neo-colonialism.'
- It is creation of new colonies through international policies and debt trap. China through its 'Belt and Road' initiative is pursuing this agenda. It can be realized by the fact that it has created its military bases in the countries such as Djibouti which was once its economic partner. Further, it has smartly demanded use of Hambantota port from Sri Lanka in lieu of relaxation in debt repayment.

Three Dimensions of International Ethics

Decision Maker:

- **Individuals:** It includes the actor or the agent who makes a choice. These include presidents, ministers, official representatives, CEOs, community leaders, advocates, employees, consumers or citizens.
- **Agencies:** It also includes those agencies which act for collective identities and are vocal for a community or a group of communities such as states, corporations, non-governmental organizations,
- **Non-state actors** also play an important role in determining the state of international affairs multinational corporations such as Wal-Mart, Microsoft, BP and other companies of this size and scope rival the capacities of many states in terms of their economic, political and social reach.

Systems and Social Arrangements:

- The second dimension of ethics is related to the systems, social arrangements, and conditions that define our range of choices. For Example: Cow slaughter ban by various states of India because of religious sentiments. However such considerations contradict with economics of the animal husbandry in a way that it hurt India's thriving sector which has made India the world's largest milk producer and the second largest beef exporter.

Decision as a moral agent:

- The decisions made by decision makers impact the overall scenario of the globe and upheld the ethical values such as compassion and humanity, while sometimes these decisions upheld the notions of regionalism and nationalism.
- For example **the case of Vaccine nationalism:** 'Vaccine Nationalism' is essentially a protectionist policy which is being adopted by developed countries across the world to procure more and more vaccines for their citizens first.

- **Equity Vs Monopoly:** There has been monopoly of Western and developed countries in some of the major international organizations.

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- **For example:** countries like US and UK has veto rights in UN security council while world's second largest country like India does not have this facility.
- Similarly, there are more number of judges in International Court of Justice form least populated Western Europe regions than Asia.
- **International Brotherhood Vs Regional Expansion:** Despite changing world order and formation of a homogeneous global community, many countries such as Russia and China are pursuing their expansionist agenda.
- Annexation of Crimea (Ukraine) by Russia and border disputes on Indo-China border is fine examples of it. These events have potential to escalate into large scale cross-border warfare which can even lead to World War.
- **Global Identity Vs Regional identity:** There is a constant competition to overshadow homogeneous cultural and religious global identity by different types of regional, religious and cultural identities which are based on radical ideological concepts.
- Adoption of stringent 'Sharia Law' by Iran after its cultural revolution of 1980s and anti-abortion laws in some of the catholic countries such as Poland and Ireland are fine examples which overshadow the global identity.
- **Case Study:** Savita Halappanavar who was an Indian woman emigrant, living in Ireland died due to anti-abortion law in the country leading to worldwide protests.
- This accident led to the passing of the Protection of Life during Pregnancy Act 2013 in Ireland which allowed abortion amid certain circumstances.
- **Climate Change VS Development:** Climate change is one of the most important environment debates around the world.
- Different conventions and treaties from Intergovernmental Panel on Climate Change (IPCC) report, 1990 to IPCC report 2021 to deals like Paris Climate Deal proposed to cut carbon footprint by reducing dependence on fossil fuels.
- However, developing countries argue that developed countries have already achieved a level of development by exploiting energy from these resources and they are yet to exploit fossil fuel resources for development.
- Hence, there is persistent opposition for non-use of fossil fuels by underdeveloped and developing nations.
- Though it is opposite to current global environment ethics but the principle of Common and Differentiated Responsibility has also to be kept in mind.

Other ethical issues in international arena:

- **Use of terrorism to pursue national interests:** Different countries of the world such as Pakistan and Iran are using terrorism as a weapon of pursuing their national interests and promoting their vicious agendas.
- Use of terrorist organizations such as Laskar-e-Toiba by Pakistan and Hezbollah by Iran for affecting international peace and bargaining powers has constantly impacted global peace and order.
- This is contrary to international brotherhood and promotion of globalization.
- **International funding to influence domestic affairs of a country:** Different intergovernmental NGOs and charity organizations are being used as a tool to interfere in internal affairs of different countries.
- These NGOs often disrupts infrastructure projects citing environmental and human rights issues and incite local population. Land acquisition for development projects become difficult at times.
- Recently, India banned international NGO's Greenpeace India's branch "Greenpeace India" over alleged illicit funding and misuse of funds. Infact it is said the recent farmers agitation is also receiving funding from other countries to disturb the peace in here.
- **Lack of responsibilities by the developed countries regarding Global Commons:** Climate Change, Ozone layer depletion, Antarctic/Arctic ice melting. Countries like USA, Russia, and China are running to explore the artic shipping route without understanding the sensitivity of the region and tribes situated there.
- **Influence of MNCs in policy making:** Different multi-nation corporations as well as global social media platforms often violate corporate norms in different countries.
- **Access to technology to few developed countries:** There is a large parity in access to technology between developed and developing countries.
- While maximum Research and Development activities are concentrated in developed countries, they do not share technologies with developing and underdeveloped countries.
- This parity deepens the economic gap between these countries.

Way Forward:

- Rapid transformation of global communication and transportation services has led to conversion of the world as a global village.
- Hence, there must be some set of uniform ethical principles of conduct to be followed so that peace and tranquility must be maintained.
- It will further strengthen mutual ties between nations and communities and will promote regional development.

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9 CULTURE

BHARAT PARV 2021

Ministry of Tourism has dedicated three virtual pavilions, namely Dekho Apna Desh, Statue of Unity & Incredible India in Bharat Parv 2021.

About:

- Ministry of Tourism organizes Bharat Parv every year since 2016. Due to the pandemic situation, this year the Bharat Parv has been organized on a Virtual platform.
- It is a festival to celebrate the spirit of India. The mega event envisages generating patriotic fervor and showcases the rich and varied cultural diversity of the country.
- It offers a unique glimpse of India's cultural diversity. Themed pavilions of multiple States and Union Territories have showcased their tourism destinations, cuisine, handicraft, and other features.

Major Highlights of the Bharat Parv

3 Pavilions showcased	Outcomes
'Dekho Apna Desh' campaign	• It is a campaign by the Ministry of Tourism, launched in 2020. • It aims to promote domestic tourism and to increase the flow of domestic travelers. • It exhibits information on various tourist destinations. • It showcases various tourism assets and products of the country.
'Incredible India Pavilion'	It comprises information on UNESCO World Heritage Sites.
Statue of Unity pavilion	• The Statue of Unity depicts Sardar Vallabhbhai Patel, a leading figure in the nonviolent Indian Independence Movement and the First Deputy Prime Minister/Home Minister of Independent India. • He is highly respected for his leadership in uniting the 562 princely states of India to form the Union of India. • The Statue of Unity is the world's tallest statue.

UNESCO WORLD HERITAGE SITES

- India has a total of 38 sites in UNESCO World Heritage.
- Khangchendzonga National Park is the only Mixed heritage site of India.
- The latest addition to the list is the Jaipur City of Rajasthan. It was added in 2019 at the 43rd Session of the UNESCO World Heritage Committee held in Baku, Azerbaijan.

KURUBA COMMUNITY MEMBERS SEEK SCHEDULED TRIBE (ST) TAG

At the massive rally was organised by Kurubas asking Karnataka Government to recommend to Central Government for their inclusion in ST list.

About:

- In a show of strength to demand Scheduled Tribe (ST) status, members of the Kuruba community carried out a massive rally in Bangalore.
- The rally comes at a time when members of the Vokkaliga community and the Panchamasali community (a sub sect of Lingyat Community) are also seeking reservation from the state government.
- Along with that Uppara community too seeks ST tag.
  - Uppara or Sagara is a caste of workers engaged in agriculture. They are also engaged in manufacturing salt.
- However the major challenge is that Karnataka has already reached a set cap of 50% reservation and any further increase will pose a challenge.

Kuruba community:

- The community enjoyed the ST status since independence. In 1977, Justice LG Havanur, who headed the backward class commission, moved the Kurubas to the 'most backward classes' category from ST list representing 8.65 percent of the state population.
- **Classified as 'Gonds':** However in certain areas they retained their ST status by being classified as 'Gonds' in Kalaburagi, Yadgir, and Bidar.
- **Location:** Kuruba is a Hindu caste native to the Indian state of Karnataka, Tamil Nadu, Andhra Pradesh, and Telangana.
- **Working-class:** Traditionally, they were shepherds, militiamen from the hills, armed vassals, or postmen.

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Constitutional Provision regarding the ST in India:

- **Article 366 (25) and Article 342:** The term 'Scheduled Tribes' first appeared in the Constitution of India. Article 366 (25) defined Scheduled Tribes as those communities, who are scheduled in accordance with Article 342 of the Constitution.
  - According to Article 342, the first specification of Scheduled Tribes in relation to a particular State/ Union Territory is by a **notified order of the President,** after consultation with the State governments concerned.
  - These orders can be modified subsequently only through an **Act of Parliament.**
  - **State specific:** The list of Scheduled Tribes is State/UT specific and not on all India basis.

Scheduled Tribes in India:

- The Scheduled Tribes are notified in 30 States/UTs.
- No community has been specified as Scheduled Tribe in relation to the State of Haryana and Punjab and Union Territories of Chandigarh, Delhi and Puducherry.
- As per the 2011 census, Madhya Pradesh has the highest ST population.
- The Scheduled Tribes comprise about 8.6% of India's population (according to the 2011 census).
- The essential characteristics of these communities are:
  - Primitive Traits
  - Geographical isolation
  - Distinct culture
  - Shy of contact with community at large
  - Economically backward

Government initiative for Scheduled Castes and STs:

- **Several laws** were enacted to implement the provisions in the Constitution for example, the Untouchability Practices Act, 1955, Scheduled Caste and Scheduled Tribe (Prevention of Atrocities) Act, 1989, The Employment of Manual Scavengers, and Construction of Dry Latrines (Prohibition) Act, 1993, etc.
- **Article 16 of the Constitution** states "nothing in this article shall prevent the State from making any provisions for the reservation of appointments or posts in favour of any backward class of citizens, which, in the opinion of the state, is not adequately represented in the services under the State".
- **National commissions:** To effectively implement the safeguards built into the Constitution and other legislation, the Constitution under Articles 338 and 338A provides for two statutory commissions: the National Commission for Scheduled Castes, and the National Commission for Scheduled Tribes.

PANDIT BHIMSEN JOSHI JAYANTI

The Prime Minister has paid homage to Pandit Bhimsen Joshi Ji on his birth anniversary.

About:

- **Birth:** Pt Bhimsen was born on February 4, 1922.
- **Tansen of India:** Hailed as the Tansen of India, Pandit Bhimsen Joshi brought Hindustani classical music closer to the common man.
- **Belong to:** He was a vocalist from Karnataka who belonged to the Kirana Gharana of Hindustani Classical Music.
  - **Kirana Gharana** got its name from a small town called Kerana in Uttar Pradesh. It was founded by Ustad Abdul Karim Khan. Famous artists such as Abdul Wahid Khan, Suresh Babu Mane, Hira Bai Badodekar, and Roshanara Begum belong to this Gharana.

GHARANAS IN HINDUSTANI CLASSICAL MUSIC

A Gharana is a system of social organization linking musicians or dancers by lineage or apprenticeship, and by adherence to a particular musical style. They function in guru-shishya parampara, i.e. disciples learning under a particular guru, transmitting his musical knowledge and style. The famous gharanas are:

- Gwalior Gharana
- Agra Gharana
- Kirana Gharana
- Bhendi Bazaar Gharana
- Jaipur-Atrauli Gharana

- **Famous ragas:** Pandit Bhimsen Joshi is remembered for his famous ragas including Shuddha Kalyan, Miyan Ki Todi, Puriya Dhanashri, Multani, Bhimpalasi, Darbari, Malkauns, Yaman, Asavari Todi, Miyan Ki Malhar, and others.
- **Bharat Ratna Awardee:** He received Bharat Ratna in 2008.
- **Other information:**
  - As a child, Bhimsen Joshi, musical instruments like the harmonium and the tanpura fascinated him.
  - His first guru was Channappa of Kurtakot; later he trained under Pandit Shyamacharya Joshi.

Hindustani Music:

- Indian Classical music has two principal types found mainly in the northern three-fourths of the subcontinent, where Indo-Aryan languages are spoken.
- One is Hindustani Classical Music and the other is Carnatic Music (found in the Dravidian-speaking region of southern India)

- Hindustani School of Music is largely vocal-centric.
- **Prominent Instruments:** The most prominent instruments of Hindustani music are sitar, sarod, sarangi, shehnai, tabla, and tambura.

RATHA SAPTAMI

Sun God temple in Srikakulam, Andhra Pradesh gears up for Ratha Saptami festival.

About:

- Ratha Saptami is an annual Hindu festival that is dedicated to Surya, the sun god celebrated on the seventh day (Saptami Tithi) of Magha, Shukla Paksha (brighter phase of the Lunar cycle).
- **Surya Jayanti:** It is considered to be the birth day of the Sun God, the day is also known as Surya Jayanti.
- The festival is also known as Magha Saptami.
- **Sun God's chariot:** The twelve wheels of the Sun God's chariot represents each Zodiac sign and the seven horses that ferry his chariot symbolise the seven colours of the rainbow.
- It marks the change of season to spring and the start of the harvesting season.
- **Arunodaya:** People rise early and take a bath during Arunodaya (sunrise). This ritual is one of the most essential aspects of Ratha Saptami.
- **Getting rid of sins:** Besides getting rid of sins, one can also maintain good health by keeping diseases at bay by worshipping the Sun God on Ratha Saptami.

CHAURI CHAURA INCIDENT

On the 100th year of the Chauri Chaura event, a postage stamp was released by the Prime Minister.

About:

- The town of Chauri Chaura was the scene of a violent incident with far-reaching consequences during the freedom struggle a century ago.
- On 4th February 1922, this town of Gorakhpur witnessed a violent incident - a large crowd of peasants set on fire a police station that killed 22 policemen. Due to this incident, Mahatma Gandhi called off the Non-Cooperation Movement (1920-22).

Key Points:

- **The incident:**
  - On August 1, 1920, Gandhi had launched the Non-Cooperation Movement against the government, which involved a boycott of foreign goods, "refusing to assist a ruler who misrules".
  - As the movement gathered momentum over the next year and a half, large numbers of volunteers became active across the country.
  - A few days before the February 4 incident, police cracked down on volunteers who were trying to stop the trade in foreign cloth and enforce a just price for meat and fish, and severely beat up one Bhagwan Ahir, a demobilized soldier from the British Indian Army.
  - On February 4, 1922, supporters of the Khilafat movement and the Indian National Congress clashed with local police. An angry mob subsequently set the local police station on fire, killing 22 Indian policemen who had taken shelter inside.
- **The immediate outcome:** Severe repression was witnessed immediately by the British authorities on the suspected volunteers, many were sentenced by session court, etc.
- **Gandhi's reaction:**
  - Gandhi, who was deeply disturbed by the incident, condemned the "crime" of the policemen's killing.
  - The volunteer groups in the nearby villages were disbanded, and a Chauri Chaura Support Fund was set up to demonstrate "genuine sympathy" and seek prayashchit.
  - Gandhi decided to stop the Non-Cooperation Movement, which he saw as having been tainted by unforgivable violence.
  - The satyagraha was formally suspended.
- **Other Leaders Reaction:** Jawaharlal Nehru and other leaders leading the Non-Cooperation movement were shocked that Gandhiji had stopped the struggle when the civil resistance had consolidated their position in the freedom movement.
  - Other leaders like Motilal Nehru and CR Das recorded their dismay at Gandhi's decision and decided to establish the Swaraj Party.

Way Forward:

- The Gandhian strategy of non-violence was based on the premise that the use of repressive force against non-violent protesters would expose the real character of the colonial state and ultimately put moral pressure on them, but incidents such as Chauri Chaura defeated that strategy.
- Besides, Bipin Chandra opines that withdrawal or shift to a phase of non-confrontation is an inherent part of a strategy of political action that is based on the masses.
- The disillusionment resulting from the suspension of the Non-Cooperation Movement nudged many of the younger Indian nationalists towards the conclusion that India would not be able to throw off the colonial yoke through non-violence.

- It was from the ranks of these impatient patriots that some of India's most beloved revolutionaries were to arise in the years to come like Jogesh Chatterjee, Ramprasad Bismil, Sachin Sanyal, Ashfaqulla Khan, Jatin Das, Bhagat Singh, Bhagwati Charan Vohra, Masterda Surya Sen, and many others.

Do You Know?

- **The Non-cooperation movement** was launched on September 4, 1920, by Mahatma Gandhi.
- This movement was started with the aim of self-governance and obtaining full independence or Purna Swaraj.
- It was started in the light of the withdrawal of the support by Indian National Congress (INC) for British reforms following the Rowlatt Act and the Jallianwala Bagh massacre.

CENTRE WITHDRAWS DRAFT HERITAGE BYLAWS FOR ODISHA'S JAGANNATH TEMPLE

Odisha government opposes culture ministry's draft heritage bylaws for Lord Jagannath Temple.

About:

- The National Monuments Authority (NMA) under the Union Ministry of Culture has published the draft heritage byelaws of Centrally Protected Monument Shri Jagannath Temple and subsidiary shrines.
- The Odisha Government is demanding withdrawal of the bylaws for temples in Ekamra Kshetra area of Bhubaneswar as well
  - Ekamra Kshetra or the temple city of Bhubaneswar is a series of ancient sandstone temples, heritage ponds and water tanks.

Draft Heritage Bylaws:

- The National Monuments Authority's draft heritage bylaw prohibits any construction activity in the 100-metre periphery of the 12th-century shrine.
- It proposed a further 200 metre area as a 'regulated area' where construction is not prohibited, but has to be approved by the NMA.
- Draft heritage byelaws have been prepared as per Section 20(E) of Ancient Monuments and Archaeological Sites and Remains Act, 2010 and Rule 18 of National Monuments Authority (Appointment, Function and Conduct of Business) Rules, 2011.

The surrounding issue:

- In 2020, the state government planned a beautification project around the area spread across 1,126 acre and develop it into a major tourist attraction.
- The state government acquired lands and properties for strengthening safety and security of the centuries old shrine.
- It will provide pilgrims with facilities such as drinking water, toilets, cloak rooms and Queue Management System.

Jagannath Temple:

- The Shree Jagannath Temple is an important Hindu temple dedicated to Jagannath, a form of Vishnu, in Puri, Odisha on the eastern coast of India.
- It is believed to be constructed in the 12th century by King Anatavarman Chodaganga Deva of the Eastern Ganga Dynasty. It is also called as White Pagoda. The Puri temple is famous for its annual Ratha yatra, or chariot festival.
- It is one of the Char Dham.
- Jagannath Puri temple is called 'Yamanika Tirtha' where, according to the Hindu beliefs, the power of 'Yama', the god of death, has been nullified due to the presence of Lord Jagannath.
- Other Important Monuments in Odisha:
  - Konark Sun Temple (UNESCO World Heritage Site).
  - Tara Tarini Temple.
  - Lingaraj Temple.
  - Udaygiri and Khandagiri Caves.

NATIONAL MONUMENTS AUTHORITY

- The government in 2010 formed the National Monuments Authority under the Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010.
- NMA's primary role was to prepare heritage bylaws for the Archaeological Survey of India (ASI) listed structures.
- It comes under the Ministry of Culture.

ARCHAEOLOGICAL SURVEY OF INDIA (ASI)

- It comes under the Ministry of Culture.
- It is the premier organization for archaeological researches and protection of the cultural heritage of the nation.
- Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI.
- It regulates all archaeological activities in the country as per the provisions of the Ancient Monuments and Archaeological Sites and Remains Act, 1958. It also regulates Antiquities and Art Treasure Act, 1972.

MARTYR TOWN

Prime Minister visited Assam's JerengaPothar and Dhekiajuli Town.

About:

- These two venues having historical significance.
- **Sivasagar's Jerenga Pothar:** where 17th-century Ahom Princess Joymoti sacrificed her life.
- **Dhekiajuli** is associated with the Quit India Movement of 1942, to lay the foundation stone for two medical colleges.

Jerenga Pothar:

- It is an open field where the legendary Joymati sacrificed her life for her husband in the 17th century, who ultimately became the king, ushering in an era of stability and peace in Assam. She was tortured to death here.
- Formerly known as Rangpur, Sivasagar was the seat of the powerful Ahom dynasty, who ruled Assam for six centuries.
- Later, she became a symbol of Ahomiya nationalism.
- The famous Joy Dol,Rong Nath Dol,Phaku Dol ,Baidyanath Dol. Vishnu Dol temple and very iconic around this location.

Dhekiajuli Town:

- It was home to possibly the youngest martyr of the Indian freedom struggle.
- As part of the Quit India Movement, processions of freedom fighters marched to various police stations across towns in Assam which included Women and children to unfurl the tricolour atop police stations.
- The British administration came down heavily on them.
- In the incident, at least 15 people were shot dead, three of them women, including the 12-year-old Tileswari Barua. Thus, she is considered as one of the youngest martyrs of India's freedom struggle.

Significance of the event:

- **Assam's participation** in the freedom struggle intensified in the 1940s. This was also a time when you saw a lot of women coming to the fore and visibly participating in the movement.
- **Children participation:** This was a time when a number of children too joined the freedom struggle.

Way Forward:

- **Sacrifice been forgotten:** Tileswari's supreme sacrifice has been forgotten.
- **Slow awareness:** No one paid the attention this event deserved, but with government's renewed focus effort, awareness is slowly on the rise.
- **A martyr's memorial** was erected in 1975, and two recent books have been written.
- **Heritage status:** Recently, the Dhekiajuli police station was accorded heritage status and restored by the Assam government.

DICKINSONIA

Fossils of world's oldest animal Dickinsonia discovered inside Bhimbetka rock shelters in Madhya Pradesh.

About:

- Scientists have discovered the fossil of the world's oldest animal in India, Dickinsonia, also one of the rarest fossils in the world.
- It is found in Bhimbetka rock shelters in Madhya Pradesh, a UNESCO World Heritage site for Paleolithic and Mesolithic cave art, near Bhopal.

Key highlights:

- **Dickinson** is an extinct genus of basal animal that lived during the late Ediacaran period in what are now Australia, Russia and Ukraine.
- The fossils are known only in the form of imprints and casts in sandstone beds.
- It is one of the links in the evolution of life, linking the explosion of life to the simple organisms which existed before that.
- **Length:** The remains of Dickinsonia fossils that are discovered in other parts of the world exceeded 4 feet in length. However, the one found in Bhimbetka is 17 inches long.
- **Leaf-like impression:** The experts found leaf-like impression 11-feet above the ground, which blended with the rock.
- **Ediacaran period:** Ediacaran Period is a geological period that spans 94 million years from the end of the Cryogenian Period 635 million years ago to the beginning of the Cambrian Period 541 million years ago.

BHIMBETKA CAVES

- The Bhimbetka rock shelters are an archaeological site in central India that spans the prehistoric Paleolithic and Mesolithic periods, as well as the historic period.
- It exhibits the earliest traces of human life in India and evidence of Stone Age starting at the site in Acheulian times.
- The Bhimbetka rock-cut architectures were first discovered by VS Wakankar 64 years ago.
- It is a UNESCO World Heritage Site that consists of seven hills and over 750 rock shelters.

Significance:

- If the discovery is confirmed, it will make India home to one of the oldest animal fossils in the world.

MAHARAJA SUHELDEV

Prime Minister laid the foundation stone for a statue of Raja Suheldev along with the development work of Chittaura lake in Uttar Pradesh.

About:

- **Who is he?** He is an Indian king from Shravasti, popularly known to have defeated and killed the Ghaznavid general Ghazi Saiyyad Salar Masud at Bahraich, the nephew of Mahmud Ghazni, at Bahraich.
- **History:** He was deeply moved by the loot and destruction of the magnificent Somnath temple by invader Mahmud Ghazni that he decided to give up the comfort of royal life as a prince.
  - He waged guerrilla warfare against Mahmud Ghazni's army.
  - On June 15, 1033, the armies of King Suheldev and Syed Salar Masood fought a war on the banks of Chittaura Lake in Bahraich.
- In this battle, Suheldev's army completely destroyed Salar Masood's army.
- **Mirat-i-Masudi:** He is mentioned in the 17th century Persian-language historical romance Mirat-i-Masudi.
  - Mirat-i-Masudi' is the biography of Salar Masud, written by Abd-ur-Rahman Chishti during the reign of the Mughal emperor Jahangir (1605–1627).

CHITTAURA LAKE

- It is a lake in Uttar Pradesh.
- A small river, Teri Nadi, flows from this lake.
- Many migratory birds are also found here.
- It is a Hindu pilgrimage site.
- Ashtwarka Muni, the Guru of Maharaja Janak used to live here in his ashram.
- There is a temple complex with the statue of Raja Suheldev and temple dedicated to Goddess Durga situated here.

- **Considered as a Muslim invader:** Since the 20th century, various Hindu nationalist groups have characterized him as a Hindu King who defeated a Muslim invader.
  - In local folklore, Suheldev is said to be a Rajbhar.
  - He is popular as a caste icon among the Rajbhars (OBC) and the Pasis (second largest Dalit caste in UP), both of whom have been competing for his legacy and are predominantly found in central and eastern UP.

THOLPAVAKKOOTHU

Leather puppets in the traditional Tholpavakkoothu are being animated by robots.

About:

- A shadow leather puppet in Kerala's famous temple art Tholpavakkoothu is being animated by a robot.
- The famous shadow leather puppets will tell stories of the epic Ramayana with the help of robots.

Key Highlights:

- **Origin:** Tholpavakoothu or shadow puppetry is a temple art form that is prevalent in the Bhagavathy temples (mother Goddess) in the Palakkad district and nearby regions in Kerala.
- This art is confined largely to Pulavar families.
- **The art:** Tholppava (Thol means leather, Pava means puppet) are moved with the help of strings, and their shadows are depicted on a screen with the help of a row of oil lamps in the background.
  - It is a ritual art performed during the annual festivals in the Kaali temples of the Palakkad district.
  - In the olden days, it was performed elaborately over forty-one days.
  - The narrative used for the performance is a mixture of prose and poetry called Adalpattu.
  - The chief puppeteer is known as 'Pulavan'
- **Tholppavas** are made of the skin of deer and the puppet forms are made by making small holes in the leather, attached vertically to a bamboo stick.
- **Instruments used:** Ezhupara, Chenda, and Maddalam.
- **Koothumadam:** The puppetry is staged on a special structure in temple premises called Koothumadam.

OTHER SHADOW PUPPETS IN INDIA

- **Togalu Gombeyatta, Karnataka:** The shadow theatre of Karnataka is known as Togalu Gombeyatta. The puppets however differ in size according to their social status.
- **Tholu Bommalata, Andhra Pradesh:** The puppets are large and have a jointed waist, shoulders, elbows, and knees. They are colored on both sides. Hence, these puppets throw colored shadows on the screen.
- **Ravanachhaya, Orissa:** The puppets are in one piece and have no joints. They are not colored, hence throw opaque shadows on the screen. The puppets are made of deerskin.

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10 MISCELLANEOUS

AERO INDIA 2021

The 13th edition of the Aero India show was held at Bengaluru's Yelahanka Air Force in the first week of February.

About:

- Aero India is a biennial air show and military aviation exhibition
- It is organized by the Defence Research and Development Organisation (DRDO)
- This is the first-of-its-kind 'hybrid' air show, which means people can also attend it digitally.
- The focus region for Aero India 2021 is the Indian Ocean Region (IOR).
- The event brings together the international and domestic military and civil aircraft makers, their support industries, personnel of the Armed forces, government officials, private entrepreneurs, and Multinational corporations.
- India offers a unique opportunity in defence and aerospace manufacturing.
- Under the Atmanirbhar Bharat Abhiyan, domestic manufacturing of bigger and complex defence platforms has become the focus of the country's defence policy.
- The exhibition provides an opportunity for industry professional to demonstrate their products to potential customer and investors and gain market insight.
- During Aero India 2021, the government formalized the deal to procure 83 Tejas light combat aircraft from the state-run aerospace company, the Hindustan Aeronautics Ltd. (HAL).

About HAL Tejas:

- Tejas is a single-engine and highly agile multi-role supersonic fighter aircraft capable of operating in high-threat air environments.
- It is the smallest and lightest Multi-Role Supersonic Fighter Aircraft of its class.
- It is designed and developed to meet the diverse needs of the Indian Air Force and Indian Navy.

PRIVACY CONCERN WITH HARYANA'S PARIVAR PEHCHAN PATRA SCHEME

The government of Haryana clarified that enrolment in the identity scheme is voluntary.

About:

- Recently there has been a privacy concern with respect to Haryana's Parivar Pehchan Patra (PPP) Scheme.

About the Parivar Pehchan Patra (PPP) Scheme:

- The scheme was formally launched in 2019 to achieve the state government's vision for 'paperless' and 'faceless' delivery of schemes, services, and benefits.
- The objective of Parivar Pehchan Patra (PPP) is to create authentic, verified and reliable data of families residing in Haryana.
- Under the Parivar Pehchan Patra (PPP) Scheme, each family is considered a single unit, and each family is provided with an 8-digit unique identification number, called family ID.
- Family IDs are utilized to identify eligible beneficiaries of government services and schemes such as social security pensions, ration cards, and birth, death, caste and income certificates, etc.
- The scheme also enables the automatic selection of beneficiaries for various schemes, subsidies, and pensions.

Potential Benefits of PPP:

- **Family record:** The PPP keeps the record of Family unit as against the Aadhar card and also it is well updated as compared to the ration cards available in the state. Thus the scheme is advantageous as most of our government schemes are structured around the family, not around an individual.
- **Smooth Service Delivery:** Government services and schemes such as social security pensions, ration cards and birth, death, caste and income certificates etc. are being delivered by various departments of the Haryana government through PPP.
- **Benefit for Migrant Workers:** It would be easier to extend benefits such as rations from fair price shops, benefits of labor schemes, street vendors' support schemes, etc to migrant workers or their families.

Issues involved:

- **Security of Data:** There is an absence of a robust data protection framework and law to protect the right to privacy of the individual. There is a risk of abuse of the personal information of individuals and families.
  - Moreover, a lot of data which is being sought is well above and beyond what is required for the delivery of a particular service.

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- **Freedom of choice:** The government has maintained that enrolment under the scheme is voluntary. However, no family would be able to avail of any government service or benefit if the family is not enrolled under the Parivar Pehchan Patra scheme.

Way Forward:

- The PPP can be linked to property records in the government database of lands and properties to prevent fraudulent transactions and clarify ownership.
- Besides, the government should start a mass campaign to make people aware about the schemes and its benefits.
- Since privacy is the fundamental right under Article 21, the genuine efforts shall be taken by state government to strengthen security of data being collected under the Parivar Pehchan Patra (PPP) scheme.

VOLUNTARY GUIDELINES ON FOOD SYSTEMS AND NUTRITION

The United Nations Committee on World Food Security (CFS) has endorsed the first-ever Voluntary Guidelines on Food Systems and Nutrition(VGFSyN).

About:

- The endorsement took place during the CFS 47th Session.
- These guidelines will support countries in their efforts to eradicate all forms of hunger and malnutrition.
- These guidelines are framed around 7 Focus areas:
  - Governance, which is Transparent, democratic, and accountable.
  - Sustainable food supply chains to achieve healthy diets.
  - Equal and equitable access to healthy diets.
  - Food safety.
  - People-centric nutrition knowledge, education, and information.
  - Gender equality and women's empowerment across food systems.
  - Resilient food systems in humanitarian contexts.
- **The guidelines follow Food System Approach:** According to the FAO, A food system includes all processes and infrastructure involved in feeding a population.
  - It includes growing, harvesting, processing, packaging, transporting, marketing, consumption, distribution, and disposal of food products that originate from agriculture, forestry or fisheries. It also includes the inputs needed and outputs generated at each of these steps.
  - The food system is composed of sub-systems such as farming system, waste management system, input supply system, etc.
  - The food system interacts with other key systems such as energy systems, trade systems, health systems, etc.
  - A structural change in the food system might originate from a change in another system; for example, a policy promoting more biofuel in the energy system will have a significant impact on the food system.

Significance of the guidelines:

- The guidelines are intended to build upon and complement the work and mandate of other international bodies, for example the UN Decade of Action on Nutrition (2016-2025) and Sustainable Development Goal (2) of 'Zero Hunger'.
- Guidelines call for the realization of the right to adequate food in the context of national food security for all particularly focusing on the most vulnerable groups.
- To make food systems more resilient and responsive, the focus is given to policy planning and governance.

The United Nations Committee on World Food Security (CFS):

- Established in 1974, the intergovernmental body serves as a forum in the United Nations System for review and follow-up of policies concerning world food security.
- **Secretariat:** The permanent Secretariat is located in the Food and Agriculture Organization of the United Nations (FAO) headquarters in Rome, Italy.
- The Committee reports to the UN General Assembly through the Economic and Social Council (ECOSOC) and to FAO Conference.
- **Funding:** The CFS receives funding from The Food and Agricultural Organization (FAO), The International Fund for Agricultural Development (IFAD), and The World Food Programme (WFP).

CORRUPTION PERCEPTIONS INDEX (CPI) 2020

The CPI 2020 was released recently by Transparency International.

About:

- **Slipped in Rank:** India slipped to 86th position out of 180 nations with a score of 40 in the CPI 2020 as compared to 80th position in 2019.
- **CPI score:** The CPI score for India has decreased to 40 as compared to 41 in 2019.
- **Toppers:** New Zealand and Denmark ranked at first position with scores of 88. Somalia and South Sudan rank lowest with scores of 12.
- **Region Specific:** The highest scoring region is Western Europe and the European Union with an average score of 66.

- The lowest scoring regions are Sub-Saharan Africa (32) and Eastern Europe and Central Asia (36).

- **Overall CPI 2020** paints a grim picture of the state of corruption worldwide. While most countries have made little to no progress in tackling corruption in nearly a decade, more than two-thirds of countries score below 50, with an average score of just 43.

Corruption Perceptions Index (CPI):

- **Published by:** The Corruption Perceptions Index (CPI), published by Transparency International (TI), scores and ranks countries/territories based on how corrupt a country's public sector is perceived to be by experts and business executives.
- **Annual Report:** Since 1996 TI has published the Corruption Perceptions Index (CPI) annually.
- **Score:** A country/territory's score indicates the perceived level of public sector corruption on a scale of 0-100, where 0 means that a country is perceived as highly corrupt and a 100 means that a country is perceived as very clean.
- **Consists of:** It is a combination of 13 surveys and assessments of corruption, collected by a variety of reputable institutions.

Transparency International (TI):

- It is an international non-governmental organization based in Berlin, Germany, founded in 1993.
- The organization generally defines corruption as "the misuse of public power for private benefit".
- This year 180 countries and territories are included in the index by TI.

Significance:

- **Widely Used:** The CPI is the most widely used indicator of corruption worldwide.
- **Public sector corruption:** The CPI is an indicator of perceptions of public sector corruption, i.e. administrative and political corruption. It is not a verdict on the levels of corruption of entire nations or societies, or of their policies, or the activities of their private sector.

SMART WALL FOR BORDER MANAGEMENT

A "Smart Wall" has been proposed to replace the physical and armed patrolling with advanced surveillance technology at the USA-Mexico border.

About:

- United States President Joe Biden stopped the construction of the physical border wall between the U.S.A. and Mexico.
- However, an alternative has been offered i.e. a 'smart' wall that replaces the physical and armed patrolling with advanced surveillance technology for border security.
- The U.S.-Mexico border wall proposed by Donald Trump also envisaged this concept of smart wall.

About Smart Wall:

- **Sensors and Radars:** The wall would use sensors, radars, and surveillance technology to detect and track border break-ins, and technology capable of performing the most difficult tasks dedicated to border security.
- **Surveillance Towers:** Hundreds of mobile surveillance towers would be deployed, and along with them, the complete system of a virtual wall would consist of a radar satellite, computer-equipped border-control vehicles, control sensors and underground sensors.
- **Thermal imaging:** It would be helpful in the detection of objects.
- **Handheld Mobile Devices:** The system would be capable of distinguishing between animals, humans, and vehicles, and then sending updates to handheld mobile devices of the U.S. patrol agents.

Benefits:

- **Empower Border Officials:** Using internet-of-things technologies like in-ground sensors, security cameras and software solutions, a smart wall could empower border officials with enhanced situational awareness to prevent illicit activity.
- **Cost-Effective Maintenance:** A physical barrier would require expensive upkeep to remain effective. However, ground sensors and IoT devices are quick and easy to deploy and inexpensive to move and update. They require only a fraction of the costs to maintain, and can be implemented gradually and as needed.
- **Minimal Environmental Concerns:** A physical wall would divide the environment or migratory paths of many species along with disrupting seasonal migration. Physical barriers exacerbate flooding by acting as dams during flash floods. A smart wall raises minimal environmental concerns, allowing wildlife and rainwater to pass freely through the area.
- **Fewer Land Seizures:** To construct a physical border wall, land seizures are extremely contentious and subject to legal challenges but small and relatively non-invasive, smart wall technologies would require fewer land seizures.
- **Overcome the limitations of difficult terrains:** Rough terrain is difficult to patrol, which could leave portions of the wall vulnerable to breaches. Digital technology, however, allows for enhanced surveillance across vast terrain.
- **Speedier Deployment:** A smart wall leverages the power of data to generate actionable insights. When cutting-edge tech

is combined with a connected data platform, border security can build a common operating picture that allows officers to survey vast territory and respond to threats in real time.

Need of Smart Walls in Indian Context:

- **Technological Advantage:** It is imperative for Indian armed forces to be well-equipped and simultaneously have the latest technological advantage over its enemies to counter the problem of terrorists and smugglers' infiltrating.
- **Rugged Borders:** Indian borders are rugged and not clearly defined at places. Hence, erecting fences, walls or any physical structures is extremely difficult. A "smart" wall, however, makes use of systems that can operate even in rugged areas.
- **Surveillance System:** Based on Israel's border security measures, India had launched Comprehensive Integrated Border Management System (CIBMS) for India-Pakistan and India-Bangladesh borders.
  - **CIBMS:** CIBMS is a fool proof surveillance system comprising thermal imagery, smart fences, advanced surveillance gadgets, anti-infiltration alarms, Infrared and laser alarms to form an invisible wall on India's borders.
- **Aerial and Riverine Surveillance:** Aerostar are deployed for aerial surveillance, while ground sensors are discreetly installed to check for infiltrators. A sonar system is deployed to secure unmanned rivers and nallahs.

Constraints of using Smart Walls:

- **Racial Profiling:** Computerized risk-assessment programs that scan motorists and cargo at or near the border may lead to racial profiling.
- **Threat of Data Misuse:** Without proper safeguards in place that determine how the data gathered by these technologies is used, stored, and shared, even the noble technology can be misused.
- **Operational Issues:** Operation and management of the infrastructure will remain a problem.
- **Response Time:** Time interval between receiving data and the decision making process may hamper the effective response on the ground.
- **Inefficacy of Past Initiatives:** Previous initiatives like this in the USA have proved ineffective.
- **Indian border is not clearly defined** at a few points so it will be hard to find an exact location for the deployment of the walls.
  - Such a system might not be feasible for India's long boundaries.

Way Forward:

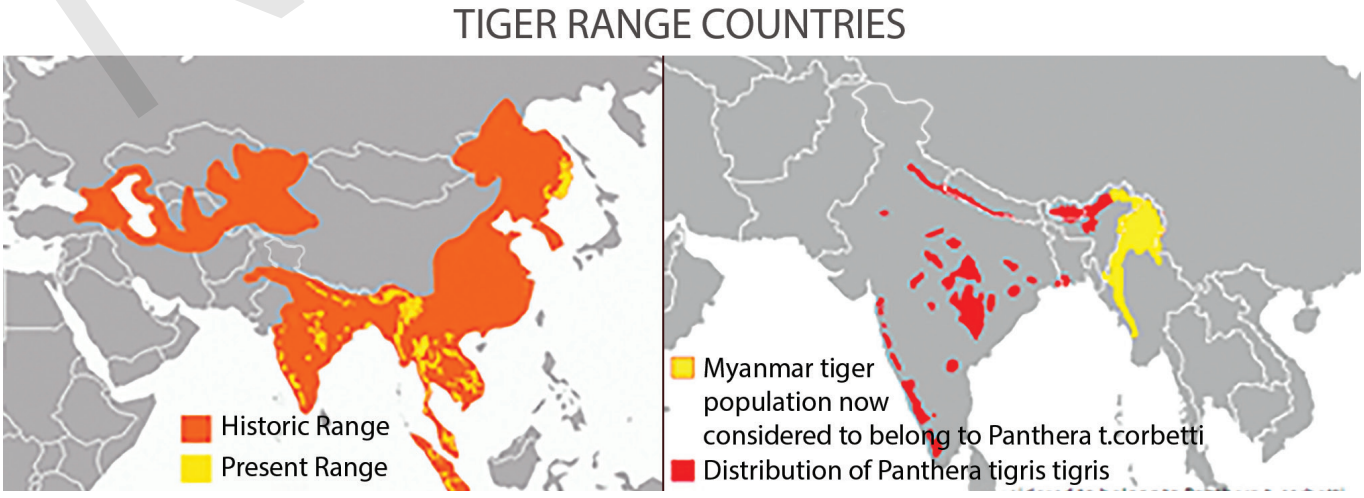
- Definitely it is a new technology and should be leveraged, however the concerns associated shall be addressed effectively and experience of other countries should be taken into considerations.

PERIYAR TIGER RESERVE

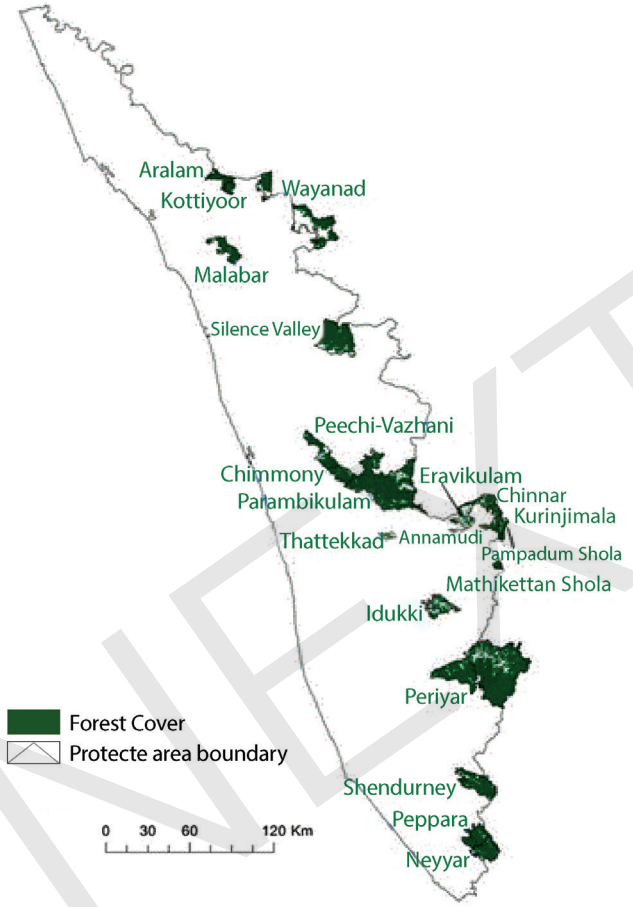
For the first time in the country, the Periyar Tiger Reserve (PTR) is training a tiger cub to naturally hunt its prey in the forest environment.

About:

- Periyar National Park lies in the middle of a mountainous area of the Cardamom Hills and Pandalam hills which are part of the Western Ghat.
- The Wildlife sanctuary is demarcated across two districts of Kerala, namely Idukki and Pathanamthitta.
- Declared a Sanctuary during 1950 and declared as Tiger Reserve during 1978. It gets its name from the River Periyar which has its origin deep inside the reserveIt is also a Tiger Reserve and Elephant reserve.


TIGER RANGE COUNTRIES
Historic Range
Present Range
Myanmar tiger population now considered to belong to Panthera t.corbetti
Distribution of Panthera tigris tigris

- The Periyar and Pamba Rivers originate in the forests of the reserve. The Mullayar river also flows through the reserve and at the confluence ocf Mullayar and Periyar river the Mullaperiyar dam is based.
- Important fauna are Nilgiri Tahr, indian Bison or Gaur, Nilgiri langur.
- The sanctuary comprises tropical evergreen, semi evergreen, moist deciduous forests and grasslands.
- There are six tribal communities nestled inside the reserve such as Mannans, Paliyans, Malayarayans, Mala Pandarams, Uralis and Ulladans.



Conservation Efforts for preservation of the tiger:

- **Conservation status:**
  - Endangered (IUCN)
  - Protected under Schedule I of Wildlife Protection Act, 1972
- There are around 3000 tigers found in India (2967), India has 70 percent of the world's tiger population.
- There are 13 tiger range countries in the world i.e., India, Bangladesh, Bhutan, Cambodia, China, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand, and Vietnam.
- There are 5 Tiger Landscapes in India, 50 Tiger Reserves and 21 states in India with Tigers present in the wild.

Project Tiger:

- Project tiger was launched in 1973. It is an ongoing Centrally Sponsored Scheme of the Ministry of Environment, Forests, and Climate Change.
- The scheme aims at providing central assistance to the tiger-range States for tiger conservation in designated tiger reserves.
- Tiger reserves are governed by Project Tiger which is administrated by the National Tiger Conservation Authority (NTCA).

The National Tiger Conservation Authority (NTCA):

- The National Tiger Conservation Authority is a statutory body under the Ministry of Environment, Forests, and Climate Change.
- It was established in 2005 under enabling provisions of the Wildlife (Protection) Act, 1972.
- **The function of NTCA:**
  - Approving the tiger conservation plan prepared by the State Government.
  - Evaluate, assess and disallow any ecologically unsustainable land use such as mining, industry, and other projects within the tiger reserves.
  - Lay down guidelines for project tiger from time to time for tiger conservation in the buffer and core area of tiger reserves.
  - Approve, co-ordinate research and monitoring on tiger, co-predators, prey habitat, related ecological and socio-economic parameters, and their evaluation

Global tiger forum:

- The Global Tiger Forum (GTF) is the only inter-governmental body for the conservation of tigers in their natural habitat. Its headquarter are located in New Delhi.
- It was formed in 1993 on recommendations from an international symposium on Tiger Conservation at New Delhi, India.
- The GTF membership includes seven tiger range countries: Bangladesh, Bhutan, India, Cambodia, Myanmar, Nepal, and Vietnam.
- The UK is a non-tiger-range country who joined the GTF.

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Test Yourself

Multiple Choice Questions

1. Consider the following statements about STARS Project.

1. It is a Centrally Sponsored Scheme under the Ministry of Education.
2. It seeks to enhance state-level education service delivery, and has provision for continuing education while responding to disasters.
3. It is funded by World Bank.
4. It covers all the States and UTs of India.

Which of the above statement(s) is/are correct?

(a) 1, 2 and 3 only (b) 1, 2 and 4 only

(c) All of the above (d) None of the above

2. Consider the following statements about Pradhan Mantri Matru Vandana Yojana

1. It includes cash transfer support of Rs. 5000 in three installments to all eligible beneficiaries.
2. All pregnant women and lactating mothers are eligible for the scheme.
3. The scheme supports the first as well as all the subsequent deliveries of the beneficiaries.
4. The scheme is implemented by Ministry of Women and Child Development.

Which of the above statement(s) is/are correct?

(a) 1 and 4 only (b) 1, 2 and 4 only

(c) All of the above (d) None of the above

3. Consider the following statements about GOBAR-DHAN Scheme

1. It aims to improve sanitation in Indian villages by funding projects that process livestock manure and agricultural waste to produce biogas.
2. The recently launched Unified Portal under the scheme ensures convergence of other schemes under other Ministries and Departments.
3. The Unified Portal is operated by Department of Drinking Water and Sanitation (Ministry of Jal Shakti) under the Swachh Bharat Mission – Grameen (SBMG).
4. The only drawback of the scheme is that it does not help achieve ODF Plus goals of Swachch Bharat Mission.

Which of the above statement(s) is/are correct?

(a) 1 and 4 only (b) 1, 2 and 3 only

(c) All of the above (d) None of the above

4. Consider the following statements regarding the Crime and Criminal Tracking Networks and Systems (CCTNS):

1. It is implemented by Bureau of Police Research and Development.
2. It is a nationwide online tracking system to integrate more than 14,000 police stations across the country.

Which of the above statements is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

5. In relation to the Quadrilateral Security Dialogue (QUAD), consider the following statements:

1. It includes countries from all continents.
2. Its member countries are from top ten economies of the world.

Which of the statements given above is/ are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

6. Which of the following is not the disputed site between India & China?

(a) Doklam (b) Galwan valley

(c) Depsang Plains (d) Lipulekh pass

7. What is the name of the line between India and China border?

(a) Redcliff Line (b) Durand Line

(c) Mcmohan Line (d) Silent line

8. Consider the following:

1. Right to education.
2. Right to equal access to public service.
3. Right to food.

Which of the above is/are Human Right/Human Rights under “Universal Declaration of Human Rights”?

(a) 1 and 2 only (b) Only 1

(c) 1, 2 and 3 (d) Only 3

9. Recently Arka Subha was seen in news, it is related to:

(a) Plants (b) Oysters

(c) Fungi (d) Turtles

10. Defense procurement Policy 2020 has stated for India to become self-reliant in 13 wepon platforms by:

(a) 2030 (b) 2022

(c) 2025 (d) 2035

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11. Which of the following Indian cities has been chosen as one of the 'Tree Cities of the World'?

(a) Kozhikode (b) Hyderabad
(c) Bangalore (d) Dehradun

12. Which of the following states has launched Haritha Haram programme to promote urban forestry?

(a) Karnataka (b) Telangana
(c) Andhra Pradesh (d) Dehradun

13. Consider the following statements with reference to Indian Leopard

1. The largest number of leopards are found in Maharashtra in India
2. It is listed as endangered animal in IUCN list
3. Melanistic leopards are easier to identify than rosette leopards

Which of the above statements are incorrect?

(a) 1 & 2 (b) 2 & 3
(c) 1 & 3 (d) 1,2 and 3

14. Consider the following statements about Mandarin Duck

1. It is a critically endangered species.
2. It is indigenously found in Loktak Lake of Manipur

Which of the above statements is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) None of the above

15. Consider the following statements regarding the Banking sector in India:

1. In 2019, the government merged ten PSU banks into five.
2. Presently there are 12 public sector banks and 21 private sector banks in india.
3. The P J Nayak Committee had proposed bringing down the government stake in public banks below 33%

Which of the above statement(s) is/are not correct?

(a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) All of the above

16. Consider the following statement(s) regarding the SAKSHAM Portal and Seaweed Mission:

1. SAKSHAM (Shramik Shakti Manch)- is a dynamic job portal for mapping the skills of Shramiks vis-à-vis requirements of MSMEs to directly connect Shramiks with MSMEs.
2. India ranks second in the total global seaweed production of ~ 32 million tons.

Which of the above statement(s) is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

17. Consider the following statements regarding the Credit Default Swap:

1. CDS is a derivative or contract that allows an investor to swap or offset his credit risk with that of another investor.
2. Non-retail users shall not be allowed to undertake transactions in credit derivatives for both hedging and other purposes.

Which of the above statement(s) is/are correct:

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

18. Consider the following statements regarding the Dhubri-Phulbari Bridge:

1. It will be India's longest bridge over a river after construction.
2. It connects Dhubri in Assam and Phulbari in Meghalaya.

Which of the above statement(s) is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

19. Donimalai Iron ore is located in the state of?

(a) Tamil Nadu (b) Telangana
(c) Chhattisgarh (d) Karnataka

20. Consider the following statements regarding the use of technology in Law Enforcement:

1. AI can be used to recognise the make and model of the car and match it with the vehicle registered with that number plate.
2. Crime analytics uses algorithms to determine potential threats, discern patterns and visualizes crime distribution

Which of the above statement(s) is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

21. Consider the following statements with reference to Bharat Parv 2021

1. Ministry of Culture organizes this event every year.
2. It showcases the rich and varied cultural diversity of the country.

Which of the above statements is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

22. Consider the following statements with reference to Jagannath Temple

1. It is an important Hindu temple dedicated to Jagannath, a form of Shiva.
2. The Puri temple is famous for its annual Ratha yatra, or chariot festival.
3. It is one of the Char Dham.

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Which of the above statements is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

23. Consider the following statements regarding Chauri Chaura Incident

1. It was a peaceful, non-violent movement led by Gandhi.
2. Gandhi had launched the Civil disobedience Movement against the government during this incident.
3. Raids and repression were followed immediately.

Which of the above statements is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 3 only (d) 1, 2 and 3

24. Kuruba community members seeking ST tag belongs to which state of India?

(a) Tamil Nadu (b) Karnataka
(c) Kerala (d) Andhra Pradesh

25. With reference to Maharaja Suheldev, consider the following statements

1. He is an Indian king from Shravasti.
2. He was deeply moved by the loot and destruction of the Somnath temple by Mahmud Ghazni.
3. He waged guerrilla warfare against Mahmud Ghazni's army.

Which of the above statements is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

26. Consider the following statements

1. Jerenga Pothar was home to possibly the youngest martyr of the Indian freedom struggle.
2. Dhekiajuli Town is an open field where the legendary Joymati sacrificed her life and became a symbol of Ahomiya nationalism.

Which of the above statements is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

27. With reference to Pandit Bhimsen Joshi, consider the following statements

1. He is known as the Tansen of India.
2. He belonged to the Gwalior Gharana.
3. He is considered as a pioneer of Hindustani classical music.

Which of the above statements is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

28. Consider the following statements regarding Ratha Saptami

1. The festival is dedicated to Surya, the sun god.
2. It is also called Surya Jayanti.
3. It marks the change of season to spring and the start of the harvesting season.

Which of the above statements is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

29. Tholpavakoothu or shadow puppetry is a temple art form which is prevalent in which state of India?

(a) Kerala (b) Tamil Nadu
(c) Andhra Pradesh (d) Maharashtra

30. Consider the following statements with reference to Asset Reconstruction Company:

1. It is a financial institution that buys the debtors of the bank at a mutually agreed value.
2. It can reschedule the payment of debts and offers alternative schemes, arrangements for the payment.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

31. Consider the following statements with reference to Asset Reconstruction Company :

1. Minimum capital requirement for formation of an ARC is 5 cr.
2. It is regulated by Reserve Bank of India under SARFAESI Act, 2002.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

32. Consider the following statements with reference to different types of Government Securities:

1. Treasury Bills can be issued only by central government.
2. Cash Management Bills have maturity period of more than 90 days.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

33. Consider the following statements with reference to different types of securities and bond instruments:

1. Zero Coupon Bonds are sold at discounted price in financial markets and get face value during maturity.
2. A Gilt Account is maintained by any entity to hold Government securities.

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Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

34. Consider the following statements with reference to National Capital Territory of Delhi Laws:

1. It provides for relocation of slum dwellers and Jhuggi-Jhompri clusters.
2. It provided for regularization of unauthorized colonies and village abadi areas.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

35. Consider the following statements with reference to slum rehabilitation schemes:

1. Jaga Mission has been launched by Maharashtra government.
2. Comprehensive slum rehabilitation scheme has been launched by Odisha government.

Which of the statements given above is/are incorrect?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

36. Consider the following statements with reference to selection of Lokpal:

1. Lokpal is selected by a panel consisting of Prime Minister and Chief Justice of India.
2. Every detail of process of selection of Lokpal comes under Right to Information Act.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

37. Consider the following statements with reference to jurisdiction of Lokpal:

1. It can take Suo-Moto cognizance and proceed against any corruption charges against public servants.
2. It can admit cases pertaining to anything said by members of Parliament in parliament.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

38. Consider the following statements with reference to Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:

1. Government has drafted these rules under Information Technology Act.
2. It aims to regulate Social Media platforms only.

Which of the statements given above is/are incorrect?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

39. Consider the following statements with reference to provisions of Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:

1. It has proposed to classify OTT contents into five categories based on age of viewers.
2. It has made social media intermediaries liable to find the first originator of messages.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

40. Consider the following statements with reference to Digital Intelligence Unit (DIU):

1. It will be setup to deal with complaints of unsolicited commercial communication (UCC) and cases of financial fraud.
2. It will specially focus on financial frauds related to the digital payments space.

Which of the statements given above is/are incorrect?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

41. Consider the following statements with reference to Telecom Analytics for Fraud Management and Consumer Protection (TAFCOP) System:

1. It will be setup in all the 22 license service area level in India.
2. It aims to manage frauds related to financial transactions in real estate sector.

Which of the statements given above is/are incorrect?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

42. Consider the following statements with reference to Freedom of Speech and Expression in India

1. Fundamental Right to Freedom of Speech and Expression which has been provided under Article 19 of Indian Constitution is absolute.
2. Right to Internet is a fundamental right under this article.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

43. Consider the following statements with reference to Pharmaceutical Sector in India:

1. Pharmaceutical Industry is currently third largest industry in the world.
2. India exports more than 20% of the global generic drugs.

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Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

44. Consider the following statements with reference to KIRAN helpline:

1. It provides guidelines to end users and solar panel developers about issues related to slar energy equipments.
2. Ministry of Power is nodal ministry responsible for its implementation.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

45. Consider the following statements with reference to state of mental health in India:

1. India constitutes more than 7.5 % of global mental health disorders.
2. It has been labeled as world's most depressed country by WHO.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

46. Consider the following statements with reference to titanium reserve in India:

1. India has 21 per cent of the global deposits of Titanium.
2. Most of the titanium reserves are found in Gondwana Rock system.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

47. Consider the following statements with reference to National Oil Spill-Disaster Contingency Plan :

1. The Indian Coast Guard is nodal agency for implementation of plan.
2. The Director General Coast Guard is the Central Coordinating Authority for its implementation.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

48. Consider the following statements with reference to Unlawful Activities Prevention (UAPA) Act:

1. It is applicable for Indian Nationals only.
2. Property of individuals can be seized after approval from Director General of National Investigation Agency (NIA).

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

49. Consider the following statements with reference to lateral entry in civil services:

1. Minimum qualification for lateral entry in civil services is 5 years.
2. It has been recommended by the 2nd Administrative Reform Commission.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

50. Consider the following statements with reference to use of hydrogen as a fuel:

1. Grey Hydrogen is extracted from renewable energy sources while green hydrogen is extracted from fossil fuels.
2. Green hydrogen gives Carbon Monoxide and Carbon-di-oxide as fossil fuels.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

51. Consider the following statements with reference to Digital Literacy In India:

1. 'Satyamev Jayate' is a digital literacy programme which has been launched by government of Uttar Pradesh.
2. It aims to curb the menace of fake news on social media platforms.

Which of the statements given above is/are incorrect?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

52. Consider the following statements with reference to National Digital Health Mission:

1. It is being implemented by Digital Media Authority under Ministry of Information & Technology.
2. It aims to provide digital health id and maintain personal health records.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

53. Consider the following statements with reference to 'Third Pole':

1. Earth's geographic centre is considered as third pole area.
2. It is covered with snow throughout the year like North and South Pole.

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Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

54. Consider the following statements with reference to common admission test for central universities as envisaged by government:

1. University Grant Commission (UGC) is nodal agency responsible for conducting this examination.
2. It will be held twice in a year.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

55. Consider the following statements with reference to financial health of public sector banks in India:

1. While share of total public sector banks in loan has fallen sharply, share of private sector banks have increased drastically.
2. As compared to private sector banks, public sector banks have high Non-performing assets.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

56. Consider the following statements with reference to retrospective taxation:

1. It is the tax levied by a government on certain product or services which were sold or purchased before the enforcement of taxation policy.
2. India is the first country in the world to have such taxation policy.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

57. Consider the following statements with reference to the Permanent Court of Arbitration :

1. It was established after first Hague Peace conference in 1899.
2. It aims to facilitate arbitration and other forms of dispute resolution between countries.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

58. Consider the following statements with reference to Bad Bank:

1. It is involved in lending and borrowing activities as a bank.
2. It is responsible for disposing NPA accounts of commercial banks.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

59. Consider the following statements with reference to National coal Index:

1. The National coal index is a price index that reflects the change of price level of coal.
2. It reflects changes in price of coal on bi-monthly basis.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

60. Consider the following statements with reference to National Investigation Agency:

1. It is neither a constitutional body nor a statutory body.
2. It works under the aegis of Ministry of home affairs.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

61. Consider the following statements with reference to K9 VAJRA-T:

1. It is a tracked self-propelled howitzer.
2. It has been developed under the 'Buy Global' programme of the Defence Procurement Procedure (DPP).

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

62. Consider the following statements with reference to Pradhan Mantri Matru Vandana Yojana:

1. It aims to support pregnant and lactating mothers in their first delivery only.
2. It aims to promote institutional delivery by providing cash incentives to pregnant women.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

63. Consider the following statements with reference to Fishing Cat:

1. It is state animal of the state of Odisha.
2. It has been categorized as critically endangered species by IUCN.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

(c) Both 1 and 2 (d) Neither 1 nor 2

64. Consider the following statements with reference to Bar-headed geese:

1. It is found in high-altitude wetlands that are up at 4,000 to 5,000 meters.

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2. It has been categorized as endangered species by IUCN.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

65. Consider the following statements with reference to Eco-Sensitive Zones:

1. These are notified by the Ministry of Environment, Forest, and Climate Change under the Environment Protection Act 1986.
2. Commercial mining and Commercial use of wood has been allowed in this zone.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

66. Consider the following statements with reference to DNA Technology (Use And Application) Regulation Bill 2019:

1. It proposes to establish National level DNA regulatory board and a DNA data bank.
2. Authorities can access the DNA of a particular person without his/her consent.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

67. Consider the following statements with reference to Sub-categorization of Other Backward Classes:

1. Article 340 envisages investigate the conditions of socially and educationally backward classes within the territory of India.
2. Justice G. Rohini commission has been constituted for examining sub-categorization of Other Backward Classes.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

68. Consider the following statements with reference to following commissions :

1. Kelkar Commission was constituted to look into reservations of Economically Weaker Sections.
2. Mandal Commission identified Other Backward Castes which constituted more than 50% in 1980.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

69. Consider the following statements with reference to sedition laws in India:

1. Section 124A of IPC which deals with sedition was drafted by Thomas Babington Macaulay.
2. Sedition is a cognizable and non- bailable criminal offence punishable with a maximum sentence of life imprisonment.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

70. Consider the following statements with reference to dam safety and management in India:

1. Water is a subject of Union list hence dams are managed by Central government.
2. National Dam Safety Authority has been envisaged by the Dam Safety Bill to provide technical assistance for maintenance of dams.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

71. Consider the following statements with reference to article 19 of the constitution:

1. It is applicable for both citizens and non-citizens.
2. It is automatically suspended when national emergency is enforced.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

72. Consider the following statements with reference to freedom of press in India:

1. India's rank in global press freedom index is under 100 among 180 countries.
2. Freedom of Press is guaranteed under article 19 of the constitution.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

73. Consider the following statements with reference to fundamental rights in India :

1. Right to silence is fundamental right under Right to freedom of speech and Expression.
2. Refusal to sing national anthem is violation of the National Honour Act of 1971.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

74. Consider the following statements with reference to regulation of medicines in India :

1. Sub-standard medicines can be seized under Drugs and Cosmetics Act 1940.
2. Central Drugs Standard Control Organization is responsible for Licensing, approval and regulation of clinical trials.

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Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

75. Consider the following statements with reference to Sustainable development goals related to mental health :

1. It envisages reducing premature mortality to One-third by 2030.
2. Sustainable Development Goals have two targets related to mental health.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

76. Consider the following statements with reference to Titanium:

1. It is used in making jewellery and airlines and defence equipments.
2. It is a heavy metal which can have negative impacts on health and well-being.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

77. Consider the following statements with reference to methods of bioremediation to check oil pollution:

1. Different micro-organisms are used to naturally decompose spilled oil and convert them to micro-nutrients.
2. Nitrogen or Phosphorus is often used to increase the rate of bioremediation.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

78. Consider the following statements with reference to methods of Production of Hydrogen:

1. It is produced by Steam Methane Reforming and Partial Oxidation.
2. Hydrogen is also one of the byproduct of coal gasification.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

79. Consider the following statements with reference to benefits of disinvestment:

1. Proceeds from disinvestment can be used by government in bridging Fiscal deficit.
2. It enables government to focus on infrastructure and social development by decreasing burden of managing businesses.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

80. Consider the following statements with reference to Reason for rising fiscal deficit in India:

1. Decrease in government's expenditure and rise in revenues is a major reason for increasing fiscal deficit.
2. Failure of government to achieve Rs 2.1 lakh crore disinvestment target is a major cause of current fiscal deficit.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

81. Consider the following statements with reference to fiscal deficit in India:

1. NK Singh Committee (2016) has recommended to reduce fiscal deficit at 1% of the GDP by 2023.
2. It proposed to limit union government's debt to 40% of the GDP by the year 2024-25.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

82. Consider the following statements with reference to different terminology related to fiscal deficit:

1. Revenue Deficit is difference between fiscal deficit and interest payments.
2. Primary deficit refers to the excess of the government's revenue expenditure over revenue receipts.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

83. Consider the following statements with reference to National Crime Records Bureau:

1. It is responsible for collecting and analyzing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL).
2. It is an agency under ministry of defence.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

84. Consider the following statements with reference to Battle of Bhima-Koregaon:

1. It was fought between East India Company and Mahars.
2. British army consisted of Maratha army defeated the local Mahar community in this battle.

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Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

85. Consider the following statements with reference to Lokpal Act, 2013:

1. The act gives Lokpal the power of superintendence over CBI with respect to cases referred by it.
2. It proposes establishment of a Directorate of prosecution within CBI.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

86. Consider the following statements with reference to dams:

1. A dam with a height of 15 meters or greater from lowest foundation to crest is defined as large dams.
2. International Commission on Large Dam (ICOLD) is responsible for identifying large dams across the globe.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

87. Consider the following statements with reference to Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act:

1. The act does not cover women working in agriculture sector.
2. 35% of Indian companies and 25% of multinational corporations in India do not comply with the act.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

88. Consider the following statements with reference to Vishakha Guidelines :

1. It covers private sector as well as private sector.
2. It envisages for constitution of a complaints committee which can either be headed by a woman or a man.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

89. Consider the following statements with reference to Indian Sign Language Dictionary:

1. It contains signs of everyday use and their corresponding English and Hindi words in order to assist the deaf community in India.
2. The new edition will comprise of 10,000 terms of daily use as compared to 6000 terms of 2019 edition.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

90. Consider the following statements with reference to Mahatma Gandhi National Rural Employment Guar¬antee Scheme:

1. It provides skilled manual work for 100 days within 5 KM of residence in every financial year to adult members of any rural household
2. It provides 50% of such jobs to Women of the area.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

91. Consider the following statements with reference to minimum age marriage of women in India:

1. Union Budget has proposed a committee to examine the marriageable age of women.
2. It will also examine age of motherhood, maternal mortality rate and nutritional level among women.
3. It will be headed by Jaya Jaitley.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and

92. Consider the following statements with reference to minimum age marriage of women in India:

1. Union Budget has proposed a committee to examine the marriageable age of women.
2. It will also examine age of motherhood, maternal mortality rate and nutritional level among women.
3. It will be headed by Jaya Jaitley.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3

93. Consider the following statements with reference to Orphan Disease:

1. It is a term which is commonly used for rare diseases.
2. The draft National Policy for Rare Diseases 2020 has been categorized rare diseases into three groups.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

94. Consider the following statements with reference to Project Tiger:

1. It is a centrally Sponsored Scheme under the Ministry of Environment, Forests, and Climate Change.

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2. Tiger reserves are governed by the National Tiger Conservation Authority.
3. The National Tiger Conservation Authority has been constituted under Environment (Protection) Act, 1986.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3

95. Chittaura Lake is located in which of the following states of India?

(a) Uttar Pradesh (b) Madhya Pradesh
(c) Kerala (d) Karnataka

96. Ravanachhaya is related to which of the following art form?

(a) Dance (b) Drama
(c) Puppetry (d) Martial Art

97. Consider the following statements with reference to different types of puppetry in India:

1. Togalu Gombeyatta is a type of string puppetry of Karnataka.
2. Tholu Bommalata is a type of shadow puppetry of Andhra Pradesh.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 and 2

98. Consider the following statements:

1. National Monuments Authority is neither a statutory nor a constitutional body.
2. Archaeological Survey of India regulates all archaeological activities in the country as per the provisions of the Ancient Monuments and Archaeological Sites and Remains Act, 1958.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 and 2

99. Consider the following statements with reference to different styles of music in India:

1. Hindustani style of music is concentrated in north India while Carnatic School in South India.
2. Hindustani style is based on Indo-Aryan languages while Carnatic style is based on Dravidian languages.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 and 2

100. Consider the following statements with reference to Orphan Disease:

1. It is a term which is commonly used for rare diseases.
2. The draft National Policy for Rare Diseases 2020 has categorized rare diseases into three groups.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

■■■■

ANSWER KEY

1. (a)	2. (a)	3. (b)	4. (b)	5. (d)	6. (d)	7. (c)	8. (c)	9. (a)
10. (c)	11. (b)	12. (b)	13. (d)	14. (d)	15. (c)	16. (a)	17. (a)	18. (c)
19. (d)	20. (c)	21. (b)	22. (b)	23. (c)	24. (b)	25. (d)	26. (d)	27. (c)
28. (d)	29. (a)	30. (c)	31. (c)	32. (a)	33. (c)	34. (c)	35. (c)	36. (a)
37. (d)	38. (b)	39. (c)	40. (d)	41. (b)	42. (b)	43. (c)	44. (d)	45. (c)
46. (a)	47. (c)	48. (b)	49. (b)	50. (d)	51. (a)	52. (b)	53. (b)	54. (b)
55. (c)	56. (a)	57. (c)	58. (b)	59. (a)	60. (b)	61. (c)	62. (c)	63. (d)
64. (a)	65. (a)	66. (a)	67. (c)	68. (b)	69. (c)	70. (c)	71. (b)	72. (b)
73. (a)	74. (c)	75. (c)	76. (c)	77. (c)	78. (c)	79. (c)	80. (b)	81. (b)
82. (d)	83. (a)	84. (d)	85. (c)	86. (c)	87. (c)	88. (a)	89. (c)	90. (d)
91. (d)	92. (d)	93. (c)	94. (a)	95. (a)	96. (c)	97. (b)	98. (b)	99. (c)
100. (c)								

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Subjective Questions

GS Paper-I

1. The year 2020 has given a new paradigm to mental health issues as the global workforce was put under mandatory lockdown. Examine the statement in light of the challenges faced by mentally ill people in India during lockdown. Also, discuss the initiatives that have been launched by the government over the past few years to tackle the sensitive issue of mental illness? **15**

2. "Amid growing population and rapid expanding Urban periphery, India needs to multi-level planning to decongest and manage its Urban area." Critically analyse. **15**

GS Paper-II

3. Is India's involvement in the QUAD, the forum that involves the US, Japan and Australia, a deviation from traditional policy of non-alignment. Discuss. **10**

4. Critically analyze the factors which led to the recent India – China LAC standoff? **10**

5. What are the reasons behind the deterioration of the UN Human Rights Council's importance compared to its successes? How can the issue be addressed? **10**

6. Discuss the Afghan Peace process taking into account the importance of Afghanistan for INDIA? **10**

7. What do you understand by the concept "freedom of speech and expression"? Does it cover hate speech also? Why do the films in India stand on a slightly different plane from other forms of expression? Discuss. **15**

8. Critically analyse how lateral entry can go a long way in improving efficiency and competitiveness in governance delivery. **15**

9. Examine the several issues that need to be rectified before DNA Technology (Use and Application) Regulation Bill 2019 can be used to empower the criminal justice delivery system. **15**

10. "Being the highest ombudsman of the country, selection and working of Lokpal must be covered under Right to Information Act." Critically analyse. **10**

11. "Recent incidents of unethical use of social media platforms for instigating riot and violence and OTT platforms to malign a particular religion has called for new ethical regulation." Critically analyse how will Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 deal with it. **15**

GS Paper-III

12. The use of technology can enhance efficiency and act as a force multiplier for the Law enforcement agency already suffering from the lack of manpower, Discuss. **10**

13. "Recent proposals in the budget to allow formation of Asset Reconstruction Companies by Private Sector and Public sector banks without government's equity will expedite the process of NPA resolution". Discuss. **10**

14. Discuss the need and challenges in indigenization of defense sector? Also state the Government. Initiatives taken in this direction? **10**

15. In wake of rising incidents of internet shutdown and use of sedition law to control protests, critically examine whether right to freedom of speech is under threat in India. **15**

16. The new strategic disinvestment policy will help India become a $5 trillion economy. Critically evaluate. **10**

17. National Oil Spill-Disaster Contingency Plan of India has failed to tackle the incidents of recurring oil spills effectively. Examine the challenges India faces dealing with oil spills and suggest solutions for the same. **10**

18. Examine how National Hydrogen Mission will help India achieve self-sufficiency in energy production and thus boost energy security. Also, highlight the challenges this mission faces and suggest solutions to overcome them. **15**

19. The Indian government has recently strengthened the anti-terrorism laws by amending the unlawful activities (Prevention) Act (UAPA), 1967 and the NIA Act. Analyze the changes in the context of prevailing security environment while discussing the scope and reasons for opposing the UAPA by human rights organizations **15**

GS Paper-IV

20. "Globalization has called for an international relation imbibed with a strong web of ethical values." Discuss. **15**

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